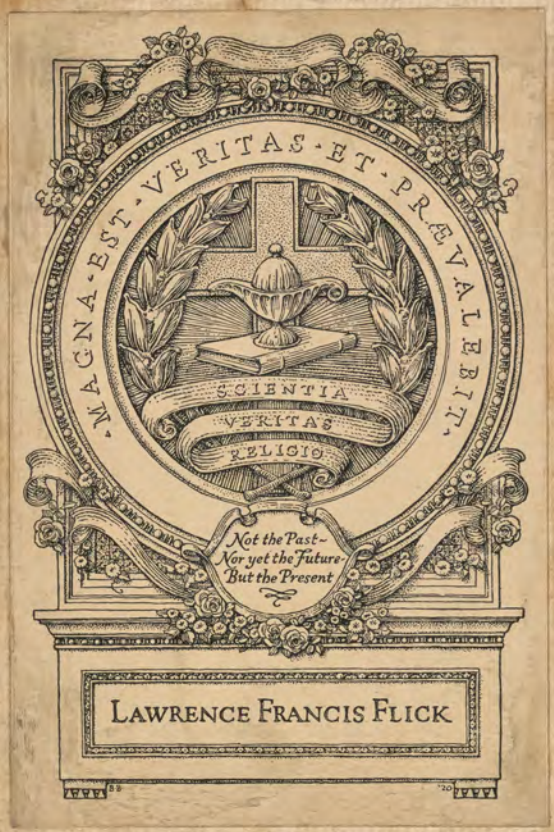
MAGNA · EST · VERITAS · ET · PREVALEBIT.
SCIENTIA
VERITAS
RELIGIO
Not the Past-
Nor yet the Future-
But the Present
LAWRENCE FRANCIS FLICK

G. F. Lehman
ad
Augustum Mühlenberg.

Rush.

Oh! who on Rush could cast a single frown,
The king of Cullen, and the lord of Brown,
Darwin's superior in each degree
The friend of Science and of Liberty.

Ward

Ex libris Augusti Mühlenberg.

George F. Lehman
ad
augustum Muhlenberg.

Philadelphia
Dec. 2. 1810

Pathology.

Gentlemen

Hitherto we have considered the living body in a healthy state, such as divines considered man before his fall. But now we will consider him in an imperfect or diseased state. Sickness & death as moral evil are the consequences of the forfeiture of primeval innocence; which, as soon as lost was followed by these effects. Every element in Nature took a part with the creator & conspired with him against man; their action however, at first, was feeble & slow, as we find by the age of some who almost reached 1000 years; & it was not till after the deluge that the life of man was contracted to the present age; the influence of ch^n together with the atmosphere conspired to produce. That life is a forced state is no less consonant to religion than to true Phylosophy. Life consists in a strife or a temporary victory over can.

5 The human body is so formed that contrast is necessary to pleasure and happiness

ses wh tend to induce death. Let us not suppose that the Creator delights in the misery of his creatures; so far from this being the case that all diseases are blessings in disguise. They are necessary to our general good & happiness; they are of important uses; they naturally lead us to the study of subjects highly important to the human race. Disease first rendered it necessary for man to undertake the study of Anatomy 2d this leads us to a knowledge of Physiology 3d It leads us to the study of nature & the Animal, vegetable & Fossil kingdoms without wh the works of Nature wd remain unexplored & unadmired. 4th It leads us to the study of the human mind; affords & furnishes exercise for our Moral faculties; for without diseases there wd be no benevolence, no charity, no Hospitals to relieve the indigent & 5th as darkness gives charms to light, so is disease necessary to impart a relish for health. 7th It serves to increase our moral virtue, for many owe their virtue to a spell of sickness & 8th It reconciles us to

Pain imparts vigor to the mind.

Disease consists in the confused and irregular operations of debilitated and disordered Nature

death & induces us to console ourselves under afflictions for the loss of our friends. Pain itself unconnected with disease has several important uses. Is the harbinger of disease & often points out its seat. Those diseases or disorders wh creep or steal slowly on the system without pain, are most to be dreaded such as Cancers, Pulm: Consumpt: chronic inflammation of the liver & chronic obstructions of all kinds. — On entering upon Pathology I am without a guide. Boerhaaves notions & observations are short & not suited to the present improved state of Medicine. Gaubius attempts to bring it into a system; but it is so full of the humoral doctrine, that it is of little service to students of the present day

Pathology treats of the Causes, seats & signs of diseases. The different causes of diseases may be divided into four 1st Remote 2d Predisposing 3d Occasional or exciting & 4th Proximate, (or morbus ipse. They are all links of one chain. For instance, in an inflammatory fever 1st Cold is the

remote cause — 2d the debility produced by the cold is the predisposing cause — 3° Heat of a stove room or of the vernal sun the occasional or exciting cause & 4 the convulsive or morbid action of the arterial system, the proximate cause. By the proximate cause I mean the morbus ipse of Gaubius, or the disease itself. —

1st General Proposition. Debility is the predisposing cause of all diseases, whether it be natural or acquired. — By natural debility I mean a predisposition to disease brought into the world with us — this debility is always attended with more or less irritability — It is acquired in infancy, youth, in adult life & in old age, in a great variety of ways all wh shall be taken particular notice of hereafter. It is acquired in infancy & childhood, by injuries at the time of birth, by washing the tender skin of infants with ardent spts, by aliments of unwholesome quality, or excessive in quantity, by the passions of Nurses & mothers, by improper methods of dres-

sing By opium Ard^t Spt^s &c being given to children, than wh^ch nothing is more injurious, by premature application of the mind to Study, particularly such as are disproportioned to the faculties of the child, as Grammar, Dead Languages &c By confinement to close Schoolrooms without exercise, enveloped by azotic air for 6 or 7 hours every day, to wh^ch may be added the despotism of Schoolmasters - by falls & other accidents, by children being lifted up, by the heals, hair of the head &c by their being violently shaken by angry nurses or Mothers &c

Debility whether natural or acquired when it occupies any particular part of the body has been called a Temperament

The Temperaments as divided by the ancients are four viz Sanguineous, Bilious, Phlegmatic & Melancholic - But I object to the term Temperament as conveying no definite meaning & I adopt in its stead the word Predisposition by wh^ch I mean a preternatural aptitude to dis-

ease in any particular part of the body, founded on debility either native or acquired & attended with preternatural excitability. — By excitability I understand a capacity of being acted upon by stimuli. Debility is seldom general, but occupying for the most part but one system of the body & predisposing it to disease. —

Predisposition is divided into

1st Arterial
2° Hepatic
3° Nervous
4th Muscular
5th Cephalic
6th Phrenitic
7th Alimentary
8 Sympathetic
9th Cutaneous. —

Arterial Predisposition is subdivided into Aortic Pulmonary & Uterine & predisposes to acute diseases especially in warm climates, there is an excess of Blood &c

Hepatic - Persons of this predisposition are said to have livers preternaturally large that secrete a preternatural quantity of bile, exists most frequently in warm climates & in autumn; discovers itself by aptitude to Diarrhoa, Cholic &c

Nervous Predisn discovers itself by a susceptibility of being violently acted upon by the slightest corporeal or mental impressions. Persons of this Predisposition are subject to Hypochondriasis & Hysteria happy & miserable half a dozen times a day.

Cephalic Predisn is attended with aptitude to head ache, Vertigo, Apoplexy, & Palsy differs from the Phrenitic in occupying the inferior or lowest part of the head.

Phrenitic differs from the Cephalic in occupying the superior part of the brain, & discovers itself in early life by an uncommon aptitude to acquire knowledge, quick perception — It is attended with great aptitude to become delirious from the slightest fever. Persons of this predisposition may be said to be all mind.

Muscular predis.n is known by little sensibility & great irritability in the muscular fibre. Persons of this predisposition are disposed to active employments, & dislike confinement. If necessity compels them to sit in one place, their hands feet & head are continually in motion — they walk fast, ride swiftly, & may be said to repose only in activity. They may be said to be all muscles.

Alimentary Predis.n is divided into Gastric & Intestinal; because the Stomach is often very excitable, with healthy bowels, & vice versa. —

Lymphatic Predisposition. The Lymphatics perform their functions with undue celerity & force.

The Cutaneous predisposition discovers itself in the facility with w.h itching, redness, eruptions &c are excited upon the skin fr.m the slightest causes, also in great difficulty of healing external wounds sores &c. —

Some one of these predispositions is present in every person. There is scarcely any person

but what has some weak part about him. Perfect health is as rare as perfect virtue or perfect reason. Predisposition is not always seperate or confined to one system - they are often blended, or combined, in various ways. The Hepatic & Alimentary are often united - Nervous Muscular & cephalic in persons subject to Epilepsy - the nervous & Cephalic are often blended. Nervous & Arterial sometimes combined in Hysteric persons. -

Predisposition varies in different periods of life, & in different seasons of the year. Thus the Alimentary prevails in early life - Arterial & Hepatic in Middle life & nervous & Cephalic in old age. Arterial predominates in Spring - Hepatic in Summer, Nervous in Autumn - Lymphatic in winter. Predisposition often descends from father to son, but are mixed changed or lost by intermarriages with Strangers - Some Nations lose their predispositions by the intermission of Strangers - Weakness in one

part commonly attended with preternatural strength in others – The same remote causes act very differently in persons of different predispositions – Persons of the same age with the same exercise & on the same day, may be taken with different diseases according as the different predispositions predispose to different affections – From this cause the same medicines produce different effects, the same Epidemic appears with different symptoms. This difference of predisposition explains the reason why the Gout attacks such opposite parts of the body, the weakest part constantly attracts disease – Lord Cornwallis used to say he could always tell the weakest part of his Camp, by General Lee's always being sure to attack that part. A man may tell which is the weakest part about him by the same means, for disease will attack that part. Relief has been given to many disorders by the cessation of Predisposition for want of excitability thro' the influence of time on the

disorder when excitement is below what is natural.

Healthy excitement may be placed at 50, this is kept up by the stimuli wh support life already described. If part of these stimuli are suddenly abstracted the excitement will come down to 40. there being at the same time an accumulation of excitability. This is the debility of abstraction. If the number or force of stimuli be suddenly increased, the excitement first rises to 60. & then descends to 40 carrying along with it suffocating excitement. This is the debility from action. Debility from both its causes occurs more readily in Children & in old people, & in the middle of the night, than in the morning & evening. Debility admits of considerable range & does not always end in disease. Elevated excitement is the usual premonitory sign of disease.

If the causes of Debility continue to act long, or their force or number is increased, depression will take place. The signs of depres-

sion are coldness heaviness, weariness, depression of Spirits, contraction & paleness of the Skin. Debility has considerable range, say from 40 to 60, but there is only a Cobwebb partition between depression & disease. Depression forbids action & calls for repose abstinence &c. The Electric rod does not more certainly attract lightning from the clouds, than debility invites depression & depression to disease. Debility & depression do not always exist in a seperate state, they are often combined, both existing at the same time in different parts of the body. Accession of a Stimulus acting upon the accumulated excitability seems necessary to the production of disease. A loss of Equilibrium at times first falling asleep &c are sometimes sufficient to produce it. Soldiers & Sailors &c escape disease while they labour constantly. Physicians seldom sicken till patients begin to get well. A sudden accumulation of excitability is pre=

In Stupor there is an exhausted state of sensibility
In Torpor there is an exhausted state of irritability
and in Inertia there is an exhausted state of
both sensibility and irritability.

prevented after violent exercise by abstracting it gradually. When stimuli are continued so long as to induce debility, obstructions &c may be produced without disease, & this may be termed disorder. –

Disorders are morbid affections in different parts of the body, in wh there is a want or expenditure of excitability with a waste of sensibility & irritability; a want of sensibility and motion; it occurs in the forms of stupor, torpor, inertia &c. It is very commonly occasioned by the force & number of stimuli being so great as suddenly to destroy excitability, thus preventing the production of disease. Disorder are most common in southern climates. Chronic obstructions of all kinds are disorders. Disorders are many, disease is an unit. –

3 Nº General Proposition. All the remote & exciting causes of disease, however diversified, are an unit, all included under the name of stimulus, the diseases produced by them the same

exciting

just as fire is the same whether generated by Friction, Percussion, Detonation, Electricity &c

3° General Proposition. Disease when excited consists in morb: excitemt or irregular action in ut nature is driven from the helm & the functions of the body are performed with difficulty. — Excitemt may be excessive but not morbid, as in the excessive or elevated excitement produced by running, dancing, or any violent exercise. Disease is often combined with the remains of depression, & sometimes of predisposing debility. The remote & predisposing causes of disease are often blended together, & act at the same time, also the exciting & predisposing. Disease is either obvious or sensible, or it is suffocated. Reaction is the effect partly of the elasticity of the Muscular fibre 5° Morb: excitemt is often greatly disproportioned to cause suffocated excitemt. Suffocated excitemt includes prostration & depression — Discovers itself by wakefulness, flushed Countenance, yel-

lowness or redness of the eyes, pulse natural. It may be converted into obvious disease by Ref.

8 4th General Proposition. Morb: excitem^t or disease is always partial. I know of no disease wh^ch invades every part of the system. Thus in fever it is confined chiefly to the Blood vessels; in Mania, to the brain; in Tetanus to the Muscles & in Dysentery to the Intestines. Absence of excitem^t in some one part seems necessary to favour its accumulation in other parts. Absence of healthy excitem^t in one part seems necessary to a morbid accumulation of it in another. There are frequently days, weeks & even years between debility & the morb: excitem^t produced by it. —

9 5th & last General Proposition. There is but one fever, one disease, throughout the whole world, & all the forms of it are produced by morb: excitem^t or irregular action. There is but one sin, & that is self-love. Adam was affected by debility in his will when he ate

× In Morb: excitement the whole system is more or less deranged – a kind of Delirium invades the diseased parts old associations are destroyed & new ones formed The Solids are over stretched or contracted – The fluids are propelled out of their natural channels Error Loci becomes general

of the forbidden fruit. It is immaterial where situated or however varied by texture, still I contend for the unity of disease. You will see that I differ from Brown in my principles, he makes debility a disease, I make it one of the causes of disease. Obstructions & Schirrus of the Liver are effects of disease, & not disease. All disorders are confined to cases where morb: excitement has ceased, or was never excited. Disorders are many, disease but one. Many persons die of debility & disorder without disease. When disease is present the whole system is more or less deranged by it. There is preternatural excitem^t without excitability, & excitability without excitement. Old associations are discovered & destroyed. The system, affected by disease may be compared to a ship in a storm at sea. Nature is driven from the helm & every thing is thrown out of its natural situation

Disease may be compared to a ladder ascending & descending by the follow^g steps. —

1st Elevated ordinary excitement
2d Debility or Predisposition whether from action or abstraction. —
3d Preternatural accumulation of excitability
4th Depression
5th Action of an exciting cause or an irritant
6th Disease or morb: excitemt. —
7th Oppression or suffocated excitemt
8th Prostration of excitemt below the point of reaction to such a degree as to be relieved by stimulants & intervacuents.
9th Disorders or effects of disease
10th Debility left by the cure or removal of the disease. — This is the usual order, but there are many exceptions. Sometimes remote causes leap over debility & depression & directly induce disease. Sometimes overleaps disease & produces disorders. Remote causes are sometimes so violent as to leap over all the intermediate steps inducing sudden death. We sometimes see debility, depression oppression

disease, disorders, & Death, all at the same time occupying different parts of the System. Inflammat^n (not as Hunter supposed the highest grade of disease) is the effect of disease & only takes place when Morb: ex: is moderate. Death often occurs without inflammation, as in violent fevers that kill suddenly. They kill by the immense force of the remote cause extinguishing life without giving time for the production of inflammat^n or even disease. Death often occurs from Hydroceph: Internus, Apoplexy &c without any inflammat^n discoverable on dissection. Morb: excitent is sometimes so violent as not to admit of effusion of any kind. The worst Opthalmia are those where inflammat^n of the eyes is not evident. They may be made so by a plentiful use of Blood-letting. We are born with an innate predisposition to disease

We come next to the Forms of disease

Forms of Disease. — These are 1st Convulsion, or the Proximate cause of fever — This is chiefly confined to the bloodvessels & muscles, occurs in Fevers, Tetanus Epilepsy &c

2° Spasm. This affects the muscles as in Cramp, the bowels as in Colic, the Stomach as in Gastrodynea, the Trachea, as in Cynanche Trachealis, the Uterus as in Parturition & this divided into Tonic & Clonic, the former is constant the latter alternates Clonic spasms occur in Parturition —

3° Preternatural Heat either external or internal, as in the Skin Stomach &c — It is always local. —

4° Itching This occurs on the Skin, Anus, Pudenda &c — Never on an internal part or beyond the reach of the Nails. —

5° Aura or Shocks — as Aura Arthritica in Gout, & an aura called by the French Tic Doloreaux but more properly Aura Dolorifica — I have known it in the head, it consists of sudden darting pains — as a shock of Electricity it goes & comes on. —

6th Suffocated Excitement. This includes oppression & prostration. It consists in such an accumulation & absorption & concentration of Morb: excitement as to suspend sensation & motion. It occurs chiefly in the Lungs, Brain, Bloodvessels & known by the absence of frequent & full pulse & of heat. Heat will become evident, the pulse rise & by Vs. — I by no means limit the forms of disease to 6. There are probably many grades & shades of the 6 primary forms. All issue from one cause Morb: Excitement. —

There is hardly any disease confined exclusively to one form of Morb: ex: often 2 or more exist at once in the same part. Sometimes they are all present at the same time, but in different parts. Sometimes they succeed each other in the same part & even on the same day. As we see storms sometimes with rain then wind, Hail, Snow & Now storms are an unit & arise only from one cause Morb: excitement in the Atmosphere. —

Thus Gent: have I given you the history of

the phenomena of disease. It may be seen in every disease in a greater or less degree. Nosology may be compared to old Heathen Mythology.

Nosology many headed monster slay no more
Let unity of Disease perform the cure.

Application of the above Principles

When excitem^t is elevated, regard the system in an unsafe state. Remove stimuli of all kinds & advise rest. Remove the Predisposing cause (debility) by gentle stimuli gradually applied. Defend the system with double the care when debility is greatest, at midnight, in the morn^g and evening. Gradually expend excitem^t, to prevent accumulation of excitability & depression. If disease consists in irregular action, let y^r remedies be calculated to make it regular. Is disease an entit^y then why not remove the same grade of it, wherever seated, by the same remedies. Typhus pulse, whether it occurs in Fever in Pulm: Consumpt^n or in Mania calls for similar remedies. The same grade of morb: excitem^t in

vessels

* Disease produces congestions in the bloodvessels
this begins in the veins

the Lungs, Brain, Liver, bowels &c call for similar remedies. I do not however mean to say that disease is always to be cured by the same remedies. They require to be varied accord^g to the part affected, & to the violence of the disease &c

Effects of Disease.

1st Inflammat^n or effusion of red blood into the serous vessels, so much so as to raise the parts, as in Opthalmia sometimes inflammat^n is so high as to rupture the vessels an error loci. The action of the vessels in the inflamed part is diminished, but that of the surrounding parts increased. After this has continued for some time, the circulation becomes languid, & congestions tumours &c are formed.

* 2^d Secretion or effusion of serum &c constituting Dropsy, Gravil, Pus f^m unbroken as well as f^m broken vessels. Black secretions of the Stomach as in Y. Fever, Matter of Carbuncle, Small pox &c This effusion of serum is often formed into Membrane as in the Trachea, Uterus, & Lungs.

3^d An increase of secretion & excretion, as

Mucous Semen &c

4th To induce Schirri, Indurated tumours &c

5th To produce unnatural sensibility & irritability or a deficiency of both or either of them. As in Stupor - Inertia &c

6th Eruptions

7th Changes certain parts into bone

8th Produces Cancer. —

9th Certain changes in the blood & all the fluids of the body, rendering them acrid, & altering their proportions —

10th Death, Partial or General — Partial death is Gangrene. —

The Seats of Disease are sometimes with difficulty ascertained —

1st Because diseases are sometimes dumb, shewing no fever pain heat &c

2d From the effects of Sympathy we find it impossible to judge precisely of the seat of the disease. — How many diseases of the brain are produced by an

affection of the Stomach & vice versa, & how often do the signs of disease in one appear in the other. A woman was seized with a puking & discharge of bile from the intestines, which was supposed to be brought on by a Schirrus of the Liver, these symptoms continued & she died. Upon dissection, the liver appeared to be in a healthy state & her uterus alone was diseased. —

3° In all general diseases the seats change with the weather, seasons of the year, remedies employed & in certain stages also. —

4° Dissections will not teach us the causes of diseases. 1st Because they often shew us none 2° They deceive us by presenting effects for causes. Thus ulcers in the Lungs in Pulm: Consumptn are the effects & not causes. Water in the brain thot to be the cause of Hydroceph: Intern: while it is the effect. Happily for us we can cure diseases without being acquainted with its seats. Tho' I mention it is difficult & often impossible to find out the principle seat of disease, yet I

Happily for us we can cure diseases without knowing its seats. We have an important resource in both the arms - There exists signals wh indicate diseases better than any thing else - I mean the Pulse & if this at any time fails - the tongue countenance respiration &c may perform a vicarious office for it An uniform knowledge of the seat of disease wd be useless - The whole arterial system with the viscera connected with it are as much an unit as any other viscus of the body - & the same action that occurs in one takes place in the whole. —

× They have been divided into common & proper, also into Primary & secondary - Symptoms of disease have also been divided into Diagnostic & Pathognomic - They are however uncertain & unnecessary

am far from thinking this kind of knowledge unattainable or altogether useless. Thus diseases of the head yeild most readily to purging those of the lungs to V.S. & those of the limbs to V.S. and blisters — 3° We often find marks remote from the diseased part; for instance, a stone in one kidney with disease in the other. I do not inveigh against Dissection but recommend it in certain parts of the body. #

Signs of Disease

A few observations necessary. +

1st Relation, Sympathy & Association are different in the diseased & healthy state

2d Signs of the same disease different in different people —

3° They differ in the Force of the same disease in the same person. —

4th They differ in Climates —

5 They are in many instances a part of the same disease. —

6th They differ in the same diseases. —

7' They differ as they relate to its form & state

8' They differ as they relate to its beginning, increase, height, crisis, & tendency to Health. Costiveness is the sign of Predisposition to Dysentery Vertigo of Predisposition to Apoplexy. —

Opinion of the danger of diseases are formed 1st From perspiration, Urine & faces, including the quantity, quality & times of discharge. 2° the tongue 3° respiration. 4' Conversation. 5th the position of the body in bed. 6th State of the Muscles 7' Appetite 8 Senses & Mental faculties. 9th State of the Body as to heat or Cold. Existence or the non existence of pain. also the Nature of it. —

Pain. — There are 3 Causes of Pain

1st Stimulus over distending & producing a tendency to Mechanical Solution, as in fever, luxation of bone

2° By such a relaxation of fibres as disposes them Mechanically to contract

3° Certain Chemical Stimuli

The signs of pain appear in every part of the

body, all in a convulsed or contracted state, & hence the phrase of biting the Dust. The head pays dearly for its preeminence as the seat of the mind, as it suffers by sympathy with every important Viscus - Stomach, Uterus, Liver, Spleen — That pain may be felt, it is necessary that the extremities of the nerves & the mind be not preoccupied so as to be elevated above the grade of pain. Sometimes in highly elevated states, blisters cannot be felt, also when the system is below the grade of pain, as in the low state of Typhus Epilepsy & Drunkenness has suspended the pains of parturition - An insensibility to the pain of wounds in battle owing to the excitement of the system above the grade of pain - Some submit to severe operations with readiness. Insensibility of the primitive Martyrs to pain amidst all their sufferings owing to the same cause. As also of the Indians when suffering. Pain tho' an unit imparts very different sensations, as it effects different parts of the body - thus it is twisting in

the bowels, acute in the head, jumping in the tooth ache, & dull in the liver; pain varies with the causes producing it — thus pain frm an injury with a blunt instrument is different frm pain, when the injury is made with a sharp instrument. Pain at first excites the mind, afterwards agitates it with the fear of death, produces the loss of domestic affections — in a very high grade it occasions the sufferers to call on their maker, or dear or departed friends Sometimes it produces sullen silence, singing laughing, occasional transports of glory. Pain is most sensibly felt in extremities of nerves Pain does not always accompany diseases nor is always proportionate to disease, Pain is often induced in a part remote frm the impression producing it. Pain is of an attractive nature — this explains the reason why fevers attended with much pain in the back & bones are rarely fatal. Pain is felt most sensible in persons of a Muscular Predisposition

Women are most susceptible of pain during the periods of Menstruation & Pregnancy. —

Circumstances of a Consolatory nature with respect to pain — 1st It is seldom constant but has intervals of ease & it is then best borne as we see in Colic Stone & also best borne when it comes on gradually.

2d Incurable pain is seldom acute but dull as in Cancer & 3d Constant pain is contrary to Nature as it destroys itself by wearing away the excitability — Related to pain is Anxiety — Nausea is another sign of disease different from pain & Anxiety

A uniform knowledge of the seat of pain is not only useless, but hurtful to us. As we cannot tell whether its Concave or Convex surface be affected, or whether its Arteries or Lymphatics. The whole arterial System with the viscera connected with it is as much an unit as any other viscus of the body. Pain is by no means the only sign of disease — in

both arms there exists a more certain sign than in any other part of the body - I mean the pulse - When it fails to give us any information of disease wh. is very seldom the case - the Tongue excretions &c may give some insight or the Countenance perform a vicarious office for it - By the pulse we can prescribe remedies for it without knowing its seats - By an attention to it I have discovered diseases & prevented death when the patient did not complain. Of all the signs of disease I regard the pulse as the most valuable - Let not any of them direct you to the causes of disease, or in your prescriptions for them - My doctrine rejects none of them, but in it the greatest homage is paid to the

Pulse.

The pulse may be called a Nosometer, or compared to the dial plate of a watch or clock; it informs you of all that is going on within. In

order to acquire an accurate knowledge of the pulse in its diseased state, it is necessary that we shd be acquainted with it in its healthy state & also in the different stages of life. In the healthy state of the pulse it is open, vigorous, free from all resistance & is at equal intervals between each pulsation. This state differs under different circumstances. — 1st It varies according to the age of the person; at the commencement of life or a few days or weeks after birth the pulse ranges between 130 & 140 strokes in a minute. Towards the end of the first year 124 at 2 yrs of age from 108 to 116 at 3 yrs from 80 to 108, at 4, 5 or 6 yrs of age from 80 to 100 & at 7 it falls from 90 to 72. In adults it is from 60 to 88 generally 60 in the minute. In old age it is less frequent & more full — slow & intermitting — this is so much the case, that when it differs from it, it shews signs of disease. At the age of 60 the pulse beats 60. In an old person of this city it beats only 36. In some according to Dr Heberdeen it descends as low as 26. —

2d Sex influences the pulse in its quickness. that of females being more frequent than that of Males as women are more irritable. —

3d Different states of Society or Civilization influence the pulse. It is slower in Savages' than in persons brot up in a civilized state - hence too the pulse is less frequent in Countrymen than in Citizens. — I have felt the Pulse of 10 Indians and found it below 60 in eight of them the other 2 reached that number, but one of them had been previously sitting by a fire & the other was the offspring of a Frenchman. All those who spend their time in idleness have slower pulses than those who are busily employed. —

4th The sizes of people affect the Arterial System, its pulsatory motion being quicker in the short or low - Ceteris paribus than in the tall Haller says in very tall men it is not more than 35

5th Climate & the different seasons of the year affect the pulse, being quicker in warm than in cold climates. In Greenland it scarcely exceeds

40. In the W Indies quicker in new comers than in the old inhabitants. In new imported slaves it is quicker than in those we have had for some time among us. —

6th Different times of the day influence the Pulse. It is slowest in the morning, at noon it is highest, & then gradually descends till evening; at bed time it is generally slower on acct of the exhaustion of excitability

Different degrees of light & darkness important. —

7th Different in the sleeping & waking state, quicker in the latter by 8 or 10 Strokes. —

8th Different positions of the Body influence the frequency of the Pulse, thus it is slowest when on the back, quicker when on the sides, quicker still when sitting up, & quickest when in an erect posture.

9th Fasting, Food, & drinks, especially such as are stimulating. It is accelerated by a full meal & decreased by fasting for some time, but afterwards it rises. so persons who die of famine, die of a fever.

10th Different positions of the arm influence the pulse - when the arm has been exposed to the cold some time, the pulse becomes much slower, & also when the arm is pressed under the body, & when its muscles are in action hence the propriety of warming the arm & relaxing its muscles when we feel the pulse

11th Exercise of the understand^g & the passions of the mind - those of a sedative lowering it & vice versa - Grief reduces it below 60

12th Anger quickens it to 140. Conversation quickens it - Hence the propriety of feeling the pulse before the patient begins to describe his disease. -

13th Bodily exercise. If the natural state of the Pulse be 65 when sitting standing will increase it to 68, walking at the rate of 2 miles an hour 78, 4 miles 88 & running, from 140 to 150 in the minute

14 Pregnancy quickens it, Quicker also when the menses flow, & during menstruation. It is of consequence to know this in Chronic cases of disease. All Pregnant women have their pulse preternaturally

quick or slow

15 Certain medicines quicken the Pulse, such as Opium, Vomits, Purges, Bark, Blisters, Steel, hot & cold baths &c. Blisters affect the pulse more or less according to the parts applied. We must know the blister pulse, Opium Pulse, & mercurial pulse to distinguish them from the morbid pulse. —

16 Coughing quickens it. —

17 Fear influences it, hence in visiting a patient we ought wait a few moments in order to let him get over his agitation produced by our presence. I have seen the pulse fall after prescribing &c.

18 Intensity of thought, influencing respiration, lessens the pulse — &c &c.

There are some deviations from the general rule of the pulse, for instance, there is a Gent: in this City whose pulse is 100 in a minute when in good health, & a lady whose pulse does not exceed 40 in a minute in health & 60 in a high fever. In others it is preternaturally quick. I heard of a Clergyman whose pulse in a healthy state beat 100 in a mi-

+ by continuous sympathy

nute. A fever afterwards restored it to between 60 & 70 & there it remained — there must have been too much excitability in the system, this diseased or morbid state was removed by the action of the fever. — Before I enter upon the morbid states of the pulse, I deem it necessary to deliver a few Physiological Propositions

1st The Heart & Arteries are connected & invested with muscular fibres possessing great irritability, or a susceptibility of being acted upon by the different Stimuli, hence if one part be affected the whole will sympathize. They may be compared to the sensitive plant, or to the bells of the Jewish high Priest — touch one & the whole will ring —

2d The Heart & Muscular fibres possess irritability

3d The same motions excited in one part of the arterial System are communicated to others — this is illustrated by the case of Hicks who died in this city with an enlarged omentum wt presided upon the Aorta & contracted its diameter — & affected the whole Arterial System, for his pulse was very small.

this

This will lead to an explanation of many other appearances, for in most diseases we may expect to find the same kind of action in the Artery as is in the diseased part. Is the pulse tense in acute Pneumony? The same occurs in the Pleura or membrane of the lungs ~~as~~ the whole arterial system. Is it soft, the vessels are so engorged, that they cant put on a tense action. Are the vessels of the Lungs engorged in Pneumonia Notha? The same occurs in the whole. Are there intermissions in the pulsations of the Heart, the same takes place in the whole arterial system. Is the Stomach or upper bowels inflamed, the pulse is tense but small, because the vessels of these parts are small. The pulse is more tense & full in inflammations of the Colon, only because the arteries of the Colon are larger. If the pulse is not small in Opthalmia & inflammations of the joints, it is only because large vessels are brot into sympathy by Contiguity. —

There are diseases in wh the pulse does not sym=

pathize, but these are few & may arise from the follow^g causes — 1st From a weakness of the heart itself, or from a want of irritability 2^d From suffocated excitement 3^d From the disordered state of the artery at the wrist. 4th From large portions of fat pressing upon the pulse 5th From an accidental pressure of the muscles of the arm by the posture of the body. 6th From cold. 7th From want of irritability in the contiguous part. 8th From a want of sympathy in the heart preventing it from equalizing the action of the different parts. Or the disease being insolated in the lungs, as in Catarrh, the artery does not sympathize, so we are to bleed in Catarrh without regard to the pulse. It is slower in inflamed parts. 9 From unequal excitement in the blood vessels, as in the Ataxic fever of Alibert, in Palsy & Cough. This want of harmony accounts for the fact mentioned by J. Hunter viz — sizy blood with a natural pulse. There may be great disease in one part with little action in another. Let not

the number of these exceptions preclude the feeling of the pulse, for they do not occur in more than one case in 20. We see sometimes see the absence of pain in Malignant fevers when the tongue is foul, & vice versa in diseases of less consequence.

Thus I have mentioned the different states of the Pulse as they occur naturally in the different stages of perfect life; but as Physicians it becomes us to go farther & acquire a knowledge of this important part of the human frame as it varies in consequence of the numerous incidents & diseases to wh. it is subjected. viz - the

Morbid States of the Pulse.

They are known 1st By their frequency & quickness. These are not necessarily connected for the pulse may be very quick yet not frequent as in the Yellow fever. By frequency is meant the number of strokes in a minute; by quickness the time in wh. each stroke is performed. The pulse varies from health in quickness & fulness as in Y. Fever, and

other acute diseases — here it varies from 60 & 80 to 180 & even 200, & falls in some diseases to 40 30, 20, & in one or 2 cases to 9. In Apoplexy it sometimes falls as low as 7

The quickness is probably caused by an irritable state of the bloodvessels, they contract more quickly by the stimulus of the blood (the arteries especially) — this irritability I conceive to be induced by the stimulus of Miasmata hence it occurs in Intermittents, & Fever &c — This circumstance in some cases gives rise to the intermitting pulse, this is when there is a cessation of pulsation for a certain time after every 1st 2d or 3d stroke, & frequently occurs in Malignt fevers. —

The slowness may depend upon 3 causes — 1st Pressure as in Apoplexy & Palsy, the pulsations being equal to each other, but intermissions occur — 2d Spasms of the heart — & 3d defect of irritability in the Arteries

2d By their Force & irregularity. this

is of more consequence than variation in frequency, quickness & fulness. Also by imparting a jerking sensation to the fingers. —

We now proceed to consider the different states of the pulse as they occur in fever

1st The Depressed Pulse. This state of the pulse is occasioned by stimuli acting so violently as to depress the system below the point of reaction, or by pressure on some great vessel. It often descends as low as 40, 30, 20, & sometimes so depressed that it is imperceptible. It is raised by ℞. It is sometimes preternaturally frequent or slow, attended with intermissions, & sometimes natural. It occurs in Plague, Y. Fever, Malignt. small pox & in Pleurisy. It is either partial or general, occurring in the extremities in the former & in the latter in the whole arterial system — occasioned by stimuli depressing the strength below the healthy state. In this depressed pulse, the heart & arteries possess their irritability. It resembles the weak or Typhus Pulse — the follow^g directions will

serve to distinguish them

1st The depressed pulse is known by its occurring in the beginning or forming states of fevers or in the paroxysm of such fevers & other diseases as are periodical —

2d By imparting a sensation of tension to the fingers when long & attentively felt. —

3d By occurring in morbid affections of the brain, heart, stomach & bowels, more frequently than in diseases of other parts of the body. —

4th By being raised by bl. & purges & taking off the suffocated excitement. —

5th By its being frequently attended with slowness or intermissions. This pulse may be compared to a tree bent by the winds, & rising to its pristine state when the storm has blown over, while the typhus resembles a tree shattered by lightning, & wh cannot be raised but by the hand of art. —

2d <u>The Catgut Bulky or Locked Pulse</u> is small quick, tense, & distinct. It is generally quick

but not always frequent imparts a sensation to the fingers similar to that produced by feeling a piece of tense catgut, whence I have named it It occurs in Malignt fevers. —

3d The Synochus Fortis (the reverse of the 2 former) a full, round, vigorous frequent & quick pulse without hardness it occurs in the highest grade of bilious fevers & Exercise produces a pulse somewhat similar to this. —

4th The Synocha or common inflammatory Pulse, being full, quick, frequent & tense, but not round & is known by heat thirst & occurs in common inflammatory fevers. This Pulse exists sometimes in the Plague, Y. Fever, Jail fever & small pox, but more frequently in Pneumonic affections, Rheumatism & Arthritis. —

5th The Synochula A quick, frequent, moderately tense but small pulse, a Diminutive of Synocha - imparting a sensation to the fingers similar to a small quill, & occurs in Chronic Rheumatism, Gout, Phtisis Pulmonalis & and in the

2d stage of Ther Fevers. —

6th Synochus Mitis. This is full, round, soft & frequent, occurring in mild bilious fevers

7th The Synochoid. This is alternately a hard & soft pulse, feels like a shattered quill & is composed of Synochus & Synocha. It occurs in the passage of fevers from the inflammatory to the low state of Butler — or from an acute to a chronic disease — Feels like a quill that has been trodden on. —

8th The Typhoid. A frequent & less tense than full pulse. This is composed of Synocha & the slow chronic state of fevers, & occurs in the Hectic & Puerperile fevers, in Scarlatina &c. The pulses preceding Typhus are above Par, those succeeding Typhoid are below Par. —

9th The Typhus. A weak quick small frequent but not full or tense pulse. This occurs in the low chronic state of fevers, also in cases of inflammatory diseases, when depleting remedies have not been used in the first stage. The blood vessels in this appear to be deprived of a part of their en-

x This pulse could be divided into a third part
great priority - viz: 2 3 or 4 full, tense and frequent
strokes, succeeded by 4 5, 6. frequent but rather small
strokes - This occurred in the case of Mrs. Lein, a
woman beyond 40. affected with hydrothorax, and
paralysis! -

ritability it is here that V.S. is forbidden & stimulants are to be given. —

10th The Hectic. The forms of this Pulse are various being occasionally Synochoid, Typhoid & Typhus. It occurs in Phthisis Pulmonalis Podagra of Tabes, from the Lues Venerea & Schrophula. —

11th The Hobling Pulse is unequal or fluctuating, tense quick & very frequent & may be divided into two — 1st one, 2 or 3, quick strokes succeeding a slow one & 2d One 2 or 3 slow strokes succeeding a quick one: —

12th The Dicrotus & Capriscans Pulses. the former strongest

13th The Serrated Pulse. Strikes the fingers like a saw. —

14th The Vermicular Pulse. small frequent & resembling the motions of a worm. —

15th The Creeping Pulse. weak & small scarce perceptible, occurs at the close of life

16 The Apparently Natural Pulse, occurs in the worst Malignt. fevers; great danger

is to be apprehended from their difficult to be distinguished from a healthy one. Scarcely ever any one of these always present. They are therefore combined 1st In double proportion, as full & weak full & frequent full & quick, quick & frequent, depressed & weak, slow & intermitting &c. The stroke wh succeeds an intermission, is twice as strong as the 2 or 3 preceding. — 2d They are compounded in a threefold ratio, as full strong & frequent, small quick & slow at the same time. 3d In a fourfold ratio. as full strong quick & frequent &c.

17th A full bounding, slow, & moderately tense pulse, wh occurs in Palsy, Dropsy &c. It is especially slow in the affected side, as in Hemiplegia. I examined the Pulse of a Paralytic patient whose artery beat on the affected side only 50 in a minute while on the other side it beat from 80 to 90.

18th A Weak low pulse without irregularity & occurs in debility, without fever, & is distinguished from the weak slow pulse of Malignt fevers by its oc-

curing in the last stages of diseases. —

19th The Aneurismatic Pulse. Full, tense & jarring. There is sometimes an absence of pulse for 2 or 3 days. I have heard of an absence of it for 7 days. This pulse occurs in Aneurism, whence its name. A total absence of the Pulse occurs often in violent affections of the Stomach & bowels, it lasts for hours. One Lady I have known to continue without a pulse for 36 hours, by eating some oysters — this lady has since recovered & been quite well for many years. —

In order to inform your patients of the state of the pulse, wh sometimes they are extremely anxious to know, you sh compare it to a scale of 10 degrees with 5 above & 5 below the healthy point. — The Pulse is very much influenced by the strength of body. In a pidgeon it is 100, in a dog 80. In the Ram the pulse has been found to beat 65 in an ox fm 36 to 38, & in a horse fm 34 to 36 strokes in a minute

I have now delivered all the Pulses that have

occurred in my practice. Dr Galmast a French Physician has discovered another wh he calls the

Gaseous Pulse soft full & round but sinking under the fingers, even the pressure of the little finger will do this. —

I shall next give you some directions for acquiring a knowledge of the state of the Pulse. —

1st Never feel the pulse of a patient the moment you enter the room; your presence excites hope, fear or some emotion in his mind, wh has an influence on the pulse. If the weather be cold, warm yr hands & feet first, but beware of entering into any conversation with him before you feel his pulse, as the influence of conversation on the pulse is very great.

2d Place yr whole four fingers on the artery this gives you a much better opportunity of judging than one finger could do. —

3d If you feel the patients left arm, use yr right hand & vice versa. —

4th Feel the wrist of both arms, as there is in many cases a difference in the two fm several circumstances, as an exposure of one arm to cold air, pressure on the artery &c &c. I have corrected my judgment

frequently in this way - from one arm I had prescribed Vs. fm feeling the other retracted my opinion. Never remove yr hand till you have felt 20 strokes. I have observed an intermission in the pulse at the 18th stroke. The Chinese Physicians feel 49, hence perhaps their accuracy in the pulse. If the case be critical shut your eyes, order silence in the room, & to use an expression of Darwins "Concentrate all sensorial power in yr finger ends" The influence of sound & detract fm the accuracy of feeling. — If the radial artery from any cause, be not easily felt - feel the Temporal wh is the next best - & here Gent: excuse my making mention of a caution in the application of blisters - never apply them so as to prevent yr feeling the pulse - if you do feel it afterwards you give him so much pain as to make an alteration in the pulse. The temporal artery must be felt - this artery you must feel in diseases of the brain

Thus Gent: I have related the knowledge I have acquired of the Pulse during my reading & practice

they are the experience of my life - they dictate when bleeding is indicated & in what quantity. Always feel the pulse before you prescribe any of the following remedies. Vomits, Purges, &c. the hot & cold baths - Pediluvium - also before the use of stimulating medicines as bark & wine, stimulating & nourishing aliments & drinks, as they all change the pulse very much. The frequency of the pulse tho' of little consequence comparatively with the force & other characters of it, has been much relied on by the Physicians of Europe especially G. Britain. They use for the purpose of acquiring a knowledge of its frequency, moment watches, quarter minute watches &c - But this is ridiculous & they will never, I hope, be introduced to American practice. A Spanish Physician by the name of Solano has made many observations on the Pulse from some of wh he asserts that 180 is the greatest number of strokes wh the arteries can beat consistently with the recovery of the Patient - 200 in Hydrocephalus is quite common

which lay the foundation of disease

but whether these ever recover I know not. The observations of Cullen are opposed to those of Dr Solano he says Dr S— observations are useless.—

Plato we are told had inscribed over the door of the School where he taught his pupils "Let no one enter here who does not understand Geometry" In like manner were I to dedicate a Temple to medicine, I would inscribe over the door of every apartment— Let no one depart hence who does not understand the Pulse.—

Remote Causes of Disease

We come now to enquire into the numerous causes of disease. Diseases have been divided into Idiopathic & Sympathetic. This however is not a good division, for disease is to be cured in the same way whether Sympathetic or Idiopathic Hydrocepl: Intern: is thot to be produced by worms in some instances here the worms in the intestines constitute the original disease, the Hydrocepl: is the Sympathetic. This sympathetic

Hydroceph: is to be cured however in the same way as Hydroceph: fm a blow in the head. Diseases have likewise been divided into Contiguous & non-contiguous into Endemic & Epidemic, Sporadic, Vernal, Autumnal &c. The remote predisposing & exciting causes of disease act in producing it sometimes seperately, at other times 2 or all of them are combined. — It has been aptly said that as soon as a child comes into the world "it inhales the lurking principles of death". The remote causes predisposing children to disease are — the ignorance of the midwife with respect to delivery — washing the child in spirits of wine — harsh soap &c — the use of spts internally & spicing diet &c — sucking bad milk &c — caps swaddling clothes &c — the manner of education, confinement in close schools &c — the amusements of children subjecting them to falls — burns &c &c

The <u>Atmosphere</u> produces diseases by its sensible & insensible qualities. The former are

+ Hot air exceeds 96° Warm between 96 & 75
temperate 75 to 65 - Cool 65 to 32 - Cold below 32°-
These divisions apply to the Positive & not to the relative
effects of Cold - —

Heat, Cold, Moisture & Dryness, Density & Rarity. Those of the latter are Marsh & Human Effluvia &c. From these originate all febrile complaints. Air may be divided into Hot, warm, temperate, cool, & Cold &

Of Heat. Heat & Cold are relative terms — Heat is an universal Stimulant — when moderate as at 75 it is friendly to health, but when above this produces debility for action when in excess its effects are shewn 1st In the Arterial system by producing fever &c 2d When combined with the rays of the sun, it affects the brain producing what has been called insolation, also sleep stupidity & death 3d On the Nervous system disposing it in a peculiar manner to be affected by Stimuli of every kind — Producing convulsions, syncope & death. 4th On the Muscles, producing 1st Preternatural activity — 2d Indisposition to voluntary motion — 3d Torpor & Languor, producing irritability also — Tetanus &c — 5th On the Skin producing itching, pimples, & a Crown co-

lour, when moderate it produces moisture, perspiration & sweat, but when in excess preternatural dryness &c - 6th On the Stomach, increasing the appetite, & then producing a decay of it - 7th It increases the Venereal appetite - 8th It induces a tendency to putrefaction in the Blood 9th In fevers, it gives the humors in the body a centrifugal determination, as in Bubo, Glandular Swellings &c - 10th It increases the excretion & secretion of Bile, wh. corrects the tendency to putrefaction in the blood mentioned above. 11th It favours the production of the Menses, & shortens the duration of their flowing - 12 It affects the eyesight, producing Gutta serena, opthalmia &c - 13th By producing debility, it blunts, renders dull, & weakens the operations of the mind producing langour &c - but strengthens the imagination. 14th It increases the laxity, & lessens the density of the Solids. 15 It is less friendly to young than to old people - hence the practice amongst the ancients of changing a cold for a warm climate

+ are 1 Such causes as tend to decrease its morbid effects
2° Such as tend to increase its morbid effects
Heat when uniform & dry is healthy An air totally devoid of moisture is scarcelly fit for respiration

7. Different people according to circumstances differently acted on by heat

Winds obviate the effects of heat

Diseases occurring in warm dry are less violent than those occurring in hot & wet weather —

The Morbid effects of heat are much lessened by habit & time — by motion promoting perspiration, by abstinence, eating vegetables only & drinking nothing but water
Heat applied to the whole or a part of the body acts different, it is more injurious in the latter case

when they became old. By this means they prolonged their lives 10 or 12 years. —

It weakens the sense of taste, it affects hearing. In the bowels it disposes to Cholera, Dysentery. The urine never indicates scarcely any change at the crisis of fevers in the W Indies. —

Relative effects of heat. When the system has been exposed to cold, it is then acted upon more forcibly by heat. Inflammatory fevers seldom fail to follow heat when preceded by cold. The body suffers less by passing from the extremes of heat to cold, than from cold to heat. Heat when long applied produces insensibility to cold as well as to itself. Warm winters are followed by unhealthy springs. Hence the propriety of the old saying "that a green Christmas makes a fat grave yard" Weather becoming temperate after being very warm produces diseases by checking perspiration. Autumns succeeding very warm Summers are often attended with bilious fevers. The fall of 1793 was preceded by a warm

dry summer. No climate necessarily unhealthy; but they are made so by the intemperance &c of the inhabitants - for it is ascertained that dress diet, drink, the Passions &c have a great influence over the body. Uniform dry weather seldom induces disease, only when succeeded or preceded by moisture - Thus diseases are generated in one season & produced in the Next. - Upon the whole I conclude that wet seasons are generally healthy, & that most diseases are induced by transition from cold to heat & vice versa - diet drink &c

Cold. This has been erroneously supposed to act as a Stimulant upon the system. Its effects are negative. It acts only by the abstraction of heat. That it is a sedative I infer 1st From the general debility wh it produces 2d From the slowness of the pulse & weariness. 3d From the operations of it being similar to those of other debilitating causes, such as Vs. Purging &c Is the pulse slow in Pleurisy - Y:

x 9th It disposes old annual sores to bleed afresh

Fever &c? So it is from depression. Is it raised by V.S.? So it is by abstracting excess of Stimuli. Is it raised by Emetics? So it is by an abstraction of the excess of Stimuli. Cold acts by inducing direct debility or debility from abstraction. Heat by inducing indirect debility or debility from action. Upon the application of cold, part of the heat is abstracted hence the apparent tonic power of cold when our bodies have been debilitated by heat

Effects of Cold 1st Upon the Arterial System by inducing debility or increasing excitability, disposes the system to all kinds of Fevers. 2d Upon the Nervous, producing a dulness of Sensation 3d Upon the muscular, producing langour, debility &c. 4th It invigorates the appetite. hence the Germans are notorious for their warm stables, in order that their Horses may eat the less. 5th It weakens the venereal appetite. 6th It considerably increases the discharge of urine. 7th It is unfavourable to size 8th It operates with other causes in producing scurvy. 10th It is unfavourable to vision 11th In a cer

tain degree it produces paleness of the skin, in a greater redness, & in a still greater, a purple or dark colour - 12th It acts powerfully in sleep - hence most diseases attack us at that time - 13th It acts more powerfully upon old people than upon young; hence we hear of their being found dead in the cold, & with their children by their sides alive - Case of a woman who was found dead & her child alive & at the breast Cold is most injurious when alternated with heat & combined with moisture. Moisture increases the sedative effects of cold by conveying off a greater proportion of the heat of the body

Weather uniformly cold is healthy. In Canada, diseases of all kinds are locked up, & they are only let out when heat succeeds or precedes cold. Heat succeeding cold produces diseases - The Spring of Russia produces fevers of a peculiar nature, & our falls also thus the diseases of Cold climates are generated in one season & produced in another & vice versa. Heat does not produce diseases after the long application of cold; because the vessels become torpid & are not able to react.

Cold produces diseases in Northern climates when warm dresses, houses &c are not used. Sudden transitions from heat to cold, does not necessarily produce disease, or vice versa. more care & attention in accommodating ourselves to the weather by dress diet drink &c wd prevent diseases. —

Middle latitudes not necessarily unhealthy, tho' they require more care & attention to bed clothes & dress. The Chinese change their dress 2 or 3 times a day, in order to accommodate themselves to the weather. Cold feet induces Catarrh. Nine tenths of all the diseases of the system are received into it by the avenues of the feet & mouth. Cold acts more powerfully on the system in the sleeping than in the waking state, hence nine tenths of the diseases are taken in at the night. Cold acts more powerfully when the stomach is empty, more powerfully on drunkards than on sober persons; because the first are generally very much debilitated when not under the effects of some stimuli. Cold, as I have said, is the predisposing cause of all diseases. More suffer from

it than fm any other cause in nature; not only of man but of other animals. The diseases are also more numerous fm this than fm other causes. In short there is not a greater enemy to the health & life of man than cold. The Spring in Autumn between the degrees of 35 & 40 are the most healthy. Heat & cold act differently in different months. The follow.g is a table of mortality for one year. —

	Whole	Boys	Girls	Men	Women	Widowers	Widows
Jan.y	142	57					
Feb.y	111	46					
March	112	—					
April	108	—					
May	107	31	29	21			
June	77	21	27	8	11		
August	89	29	20	18	8	5	9
Sept.r	130	36	35	12	34	3	10
Oct.r	110	43	35	8	13	2	9
Nov.r	216	42	34	101	19	5	15
Dec.r	134	38	35	30	15	7	9

Effects of Wind in producing Disease.

Winds are hot & cold, dry & moist. They are dry fm the west & moist fm the east. The body is

immersed within them. Sudden changes from heat to cold more certainly affect the body when accompanied with high winds. They produce certain changes in the mind, as the Sirocco & Samiel winds. They act more powerfully upon invalids than upon healthy people. Not only winds, but the absence of them produce disease

Rarity & Density of the Atmosphere. Air highly rarified produces numerous diseases, great muscular weakness, difficulty of breathing, quick pulse, profuse sweats sickness at stomach, sleepiness an aversion to and Appt & great pain according to Mour: Sausore. These effects are attributed to a more rapid combustion of Azote or a deficiency of Oxygen — Baron Humboldt who ascended the highest mountain said it produced hemorrhage from the nose, eyes, mouth &c — By his Eudiometer the oxygen descended to 12 parts in the 100. —

Air too dense is very hurtful to Asthmatical or consumptive patients. Sudden changes from rarity to density & vice versa are very prejudicial. —

We have now gone thro' the sensible qualities of the Atmosphere, wch are heat, cold, moisture, dryness rarity density &c. Pneumonia, Anginosa, Pleurisies & Catarrhs are among the diseases most frequently induced by the sensible qualities of the air.

Impregnations of the Air. We come now to consider the impurity of the air as the remote cause of disease. ——

Marsh Effluvia, or as Dr Mitchell has called them Koino Miasmatic exhalations. For the production of these, 3 things are necessary - viz heat, moisture & putrifying animal or vegetable matter. The Thermometer shd stand at 80°. When the ground is covered with water no exhalations can take place; but when there is not a sufficient quantity of rain or heat either to overflow, or dry up the surface of the ground, then the exhalations are produced. The summer shd be moderately moist to produce miasmata. Heavy rains have sometimes produced miasmata by washing off the green covering that is some=

× producing Nausea Vomiting &c

times found upon stagnant waters but prevented the sun from acting upon them without which the miasmata could not be formed. These effluvia arise partly from Animals & partly from vegetables but more generally from the latter. The following vegetable matters produce these Marsh Effluvia viz Putrid Cabbage, Potatoes, Turnips, Peppermint, onions, aniseed, carraway seed confined in the whole of a ship, Coffee, cotton, hemp, flax, straw, old books & old paper money, the timber of an old house, log houses the second year after they are built, in consequence of the putrefaction of the bark, green wood confined in cellars, green timber of a ship. Also air stagnating in the hole of a ship & cellars, & stagnated waters when agitated produce Miasmata Fevers are not so often produced by Animal as by vegetable effluvia. There are however a few which are produced by the former. —

~~Marsh~~ Miasmata act first upon the Stomach & 2d upon the intestines, producing Cholera Dysentery &c 3d Upon the Liver, increasing the secretion of

a producing Apoplexy, Mania
b producing inflammat^n

c Erysipelas Leprosy &c The Colour of the African has been supposed to arise from the same cause

bile, imparting to it viscidity & acrimony. 4th Upon the bloodvessels, producing 1° Fever inflammatory & 2° Fever intermittent Remittent, Jail, Typhus or low Chronic fever, & Febricula or inward fever, hemorrhages &c 5th On the Brain a Kidneys b & Spleen, more particularly this last producing an inflammat.n or induration in it called Ague cake. 6th Upon the nervous system 7th On the Muscles producing convulsions &c 8th On the Lymphatic System producing glandular Swellings &c 9th on the eyes producing Opthalmia & 10th upon the skin producing Carbuncles c eruptions &c. The Human effluvia are of two kinds from an excreted & secreted matter. Miasmata may exist in the body 20 or 30 days without producing disease sometimes even 6 Mos. Persons long accustomed to these Miasmata are but little affected with them. hence the natives of sickly countries suffer but little or perhaps not at all from the action of the same Miasmata which in new comers produce formidable diseases & death. Miasmata frequently do nothing more than give

a predisposition to disease in one summer & in the next summer acting on this predisposition diseases are produced. The diseases produced by Marsh miasmata are not contagious, they are incapable of generating themselves. These Miasmata have been carried by the winds 9 miles. Strange as it may appear, it is nevertheless a fact that the existence of these Miasma have been called in question, because the Eudiometer does not discover that air impregnated with these, is less pure than air generally is. As well might we deny the existence of a Spirit because we do not see it.

There is a species of Miasma exhaled from living animals called by Dr Mitchell Idio Miasmatic exhalation. The Jail fever is produced by it. Plague is sometimes produced by it, & in some instances the Scurvy. Dysentery not unfrequently proceeds from it. They are more injurious to health in the morn^g & evening than in the middle of the day. They are a source always of disease, & are assisted by the following circumstances. Un-

cleanliness, confinement in large crowds, low va-
pid vegetable diet, scanty & putrified animal diet,
mixing of strangers together, great prostration and
grief of mind; all these predispose to disease. —
Cold weather is favourable to the spreading of con-
tagious diseases in consequence of the houses being
shut up very close in order to keep the cold out
It is a disease of winter & of Cold Countries; it
seldom requires or admits of B.f. Woollen & other
clothes retain & spread contagion, wood also. Walls
if white washed will not retain the effluvia of Ty-
phus fever — Effluvia act more powerfully upon
the system when in a debilitated state. Pregnant
women often escape the Ty. Fever in consequence
of the stimulus of distention fr pregnancy, also
persons affected with running sores escape it. Per-
sons are capable of affecting themselves with mi-
asmata. Persons highly charged with Miasmata
may affect others without being affected themselves
Human Effluvia affect 1st the bloodvessels 2d
the brain with delirium 3d the glands 4th Pro-

duce Dysentery 5 Intermittent & Malign fever
6 Scurvy & Catarrh & lastly influenza

Human effluvia are often combined with marsh miasmata in producing bilious fevers. These are seldom conveyed more than 10 or 12 feet from the body. It is difficult to tell what it is in the air wh constitutes an inflammatory constitution of the atmosphere. But certain I am such inflammatory constitution does often exist. Once thot it depended on the air being super oxygenated, but late experiments of the Chymists have proved that the proportion of Oxygen in the air is the same when the inflammatory constitution prevails as at other times. No climate or Country necessarily unhealthy, for fevers depending upon both the human & marsh effluvia are owing entirely to the carelessness of Man. Were we to take the necessary precautions to drain our meadows of their impure stagnant waters, to remove all putrifying matter around us, & keep our persons & cloaths clean, these mortal distempers wd cease to affect.

the human race. They are like the vermin sent as a reward for our laziness & folly. The Jail Fever is rare in the U. States, because there is not so much poverty & filth among our citizens, for these are the causes wh. give rise to this fever in other places.

The Jail Fever differs from the bilious or Yellow Fever in the follow.g particulars - 1st It comes on in cold weather & is not affected by rain or frost - 2d It most frequently attacks the weak & infirm 3d The pulse is Typhoid - the blood vessels being affected with but a feeble degree of action. 4th It continues for 20 or 30 days 5th It is propogated in a different manner by excretion & perspiration. From all the excretions, but particularly the perspirable matter, the Idea miasmata proceed. — The Yellow or Bilious fever is distinguished by the follow.g particulars 1st By its attacking in warm weather - 2d By coming on suddenly - 3d By attacking principally the young & robust 4th By remissions & intermissions - 5th By the increased secretion of bile - 6th By its being of a shorter duration as 3, 5, or 7 days, but it now & then runs

× The Matter w^h produce Influenza spreads with the intercourse of the Citizens – this I infer from the sudden increase of Patients in this disease – I infer that Influenza does not spread by Contagion because it has never been confined to any one spot nor could any place be traced as the place of its Origin

on in a chronic form for 20 to 25 days 7th By its being destroyed by cold & heavy rains. The human or Idiomiasmatic exhalations, & the marsh or Coi-no miasmatic exhalations affect the Bloodvessels in all the 7 forms of fever viz The Bilious, mild bilious, Remitting, Intermitting, Typhus, Typhoid & Febricula.

×

Phlogiston, or air rendered impure by respiration &c Persons affected with Phthisis are greatly oppressed by this air 2d Air is unwholesome when mixed with fumes of Sulphur or charcoal 3d Air of certain Manufactories as Lead, Arsenic &c when they are volatilized. 4th After earthquakes the air has been observed to be extremely disagreeable, especially after one that happened in Jamaica on the 17th June 1692 5th The Sirocco & Samiel winds, 6th Winds that have passed over a hot sandy country. 7th The air of certain mines. If birds fly over the lead mines of Scotland they are immediately killed on the days of work; but on a Sunday when the labourers rest, they may fly over

with impunity. Hence we may learn an important lesson, that a remote cause can be seldom able to produce a disease without an exciting cause, & in the Y Fever, I have never seen a case in wh I could not trace the disease to some cause or other wh excited it into action. After having thus treated of the impregnations of the air & their influence over health we will proceed to mention the effects of

Situation over health. New countries are generally healthy until the trees wh exclude the action of the sun are partially removed. From the time of clearing until cultivation takes place it is sickly. The wood cutters in the Cedar Swamps of Delaware & Carolina enjoy good health when the trees are standing, but after they are cut down, & begin to putrify by the solar influence, health abandons the labourers. Towns are more sickly than the country. The atmosphere, impure exhalations from innumerable sources, & the increased heat together with the vegetables being forced by manure & thus putrifying sooner are the causes of cities being more

unhealthy. Country people are more predisposed to Dysentery from their vapid vegetable diet. Bilious fever, Typhus Mitior - Consumptn &c are more frequently the products of vitiated city air than of country air. It has been computed that 3 or 4 die in towns for one in the country. Sandy soils are unhealthy. Vicinity to towns, or marshy grounds, one great source of disease. Vicinity to deserts & ponds - these last may be remedied by having trees planted around them. A mountainous more healthy than a low situation, but there is one exception to this, viz when the miasmata arise from the bottom & neighbourhood - A collision of air is unhealthy, as the air upon the sea shore. Other local circumstances affect the healthiness of a situation - viz Residence in Cellars more unhealthy than in rooms above ground in hospitals &c. Houses situated so as not to receive the action of the sun on every part, are not so healthy as those built in a contrary manner. Dwelling houses often a source of disease from the materials of wch they are made, as green wood -

this is prevented by previously soaking the timber in water, by wh the sap is discharged – Also by being built of Stone when recently taken fm the ground – by vapours of new plaister & paint – hence the wealthy Romans, never occupied a house for one year after it was built. A house is rendered unhealthy fm age for the wood when old exhales a vapour wh produces Intermittents – fm being too much confined by trees, & fm being too hot or too cold – by moisture of Cellars; by small smoky rooms, want of cleanliness &c – From the water used families are sometimes rendered unhealthy. –

I knew two cases of Malignant Fever wh proved fatal near Zackery's court in this City, & none of the neighbours affected with it – 2d I also knew Heads of families die of this disease in Arch Street when none of the neighbours were the least affected. These probably originated fm something impure in the Cellars, or fm some other local cause. 3d & lastly a fact more proper to our subject related by Van Swieten viz That the whole of the Students toge-

gether with the Master of a certain University, were diseased, when none of the neighbours were the least affected. This probably arose from some exhalations from privies & Cellars, or rotten vegetables near the university, or some other local cause. —

Change of Situation over health.

1st Persons changing a cold for a warm climate are frequently affected with fevers — 2d Persons leaving a sickly neighbourhood & coming to a city are affected in the same manner — the miasmata in this case being previously received into the system, are excited into action from the many exciting causes in a city, & the system thereby becomes diseased 3d Old people leaving a cold & entering a warm climate often become more healthy, whilst the same change of climate in young people wd produce inflammatory complaints. 4th Removals from marshy to airy dry situations often contribute to health; except in old people who often suffer by this change, since it deprives them of a customary stimulus. viz the Miasmata wh on a former occasion were said to

be, in part, the support of old age, but the destruction of youth & the middle aged. 5th Those who have made long sea voyages are frequently affected with catarrh on a near approach to land, fm a mixture of the land & sea airs (case of a Sea Captain with whom Dr Rush crossed the Atlantic) Ct I have been at much trouble in trying to find out whether thunder & lightning independant of the change of the air, had any influence over the system in producing disease; but have not been able to collect any thing certain on this point. I know a lady who could tell the approach of a thunder storm by a giddiness & headache wh she always experienced some time before, & wh continued until the storm was over. Some persons appear to be born with a fear of thunder. A Lady in this City some years ago, in consequence of her dread of thunder, wd during the continuance of a thunder storm shut herself up in a dark room & drink an immense quantity of Spirits without the least intoxicated, at other times she did not

discover the least attachment for them. Excitem^t-
Excitability were either so suffocated that they
could not act, or were suspended in this case. —
Leeches appear to be sensible of the change of wea-
ther by their motions. Mr Cowper informed me
that he could always foretel the approach of thunder
by certain motions made by the leeches w^h he kept
in his house — 7th Sound appears to affect some
people. A Lady in this City has always sweats
chills, tremblings & the appearance of great terror on
hearing the noise produced by a carriage drawn
over the pavements of the streets. Deafness has
been induced in two cases to my knowledge, in
consequence of the firing of Cannons Fever
death. Birds have dropt dead f^m the firing of
cannon upon the deck of a ship. We will now
consider the effects of the heavenly bodies upon
health, & first

<u>Of the Sun</u>. — We have already considered
in what manner the heat of this body, by warm-
ing the air operates on the system — We will now con-

x In cold countries the reflexion of the sun upon the snow proves very hurtful to the eyes. —

nder its light absence &c. An excess of solar light sometimes produces blindness & inflammation, while its absence produces temporary blindness from a want of stimuli both wh are called Nyctalopia whether it depends upon an abundance or deficiency of light. Even the momentary absence of the sun has produced alarming symptoms in the Y. fever. Darkness reduces the force & for a time the frequency of the pulse. Most diseases attack at night & death most frequently occurs at that time. It has been asserted that 3/4 of mankind die in the night. May not this be owing to the absence of the Sun? — Secondly

Of the Moon. — The influence of the Moon is felt by all animated nature, even the tides are under its influence. Vegetation is measurably under it. Death occurs more frequently at the full & change of the moon than at any other time of it. The Paroxysms of many diseases appear to be influenced by the moon. It affects fevers. Dr Mosely relates the case of a Brit-

& perhaps from the operation of the Medicine keeping up excitement?

ish Officer who was regularly attacked with Hæmoptysis about the full or change of the moon & at no other time. I have seen it in 2 cases. I know a person affected with the Gout in this place always to have the inflammatory paroxysm, on the full or change of the moon. The moon affects the nervous system, also madmen, hence the term Lunacy. Epilepsies & Asthmas appear to be under the influence of the moon. It affects the tranquility of the mind. hence a lady observed her husband to be more petulant on the full of the Moon. Parturition appears to be hastened by the full. Worms are more troublesome in the bowels of Children at the full & change than at any other time. Suicide appears to take place more generally about the full of the moon than at any other time. Chronic diseases yeild less to the influence of the moon than acute. Hypochondriac & Epileptic patients appear to be very much influenced by the full & change of the moon. Dr Haller speaks of a person who felt the calculus in the

bladder more sensibly at the change of the Moon than at any other time. —

Eclipses of the Sun & Moon have great influence over the system. During the eclipse of the Sun on the 16th June 1806, the Lunatics in the Hospital were remarkably silent for 3 hours. Bessa died at the instant of the Eclipse of the Sun. A more remarkable fact is the following 24 British Soldiers were attacked at the moment of an Eclipse with Intermittents. If the eclipse of the 16 June had appeared in the Autumn when persons were predisposed to disease, it is highly probable that diseases would have been immediately produced. The Diurnal rotation of the earth appears to have great influence in regulating diseases, & probably may sometimes induce them. The pulse varies with the different changes occasioned by the earths revolution for instance it is slow in the morning quicker at noon & slower again at night &c. Dr Darwin has happily called the evening the autumn of the day. He has remarked that apoplexies & palsies

are more frequent at the equinoxes. It is important to keep these changes in mind, since they will be of great practical use. —

Of Contagious Diseases

These were formerly thot to be very numerous, but they are now known to be much more limited. — They are divided into Epidemic, Endemic, Sporadic & Intercurrent. Contagious diseases are received into the system by the Lungs, Saliva, Nerves & Skin. They are sometimes called Specific Contagious f^m particular parts of the system being affected only, as the Small pox, Hooping Cough, Measles &c. The Lues venerea, Itch, Ringworms, & diseases of the Skin differ f^m the Smallpox &c in being communicated only by contact — also in their originating f^m a fixed, & the Spox &c f^m a volatile matter — Specific contagious diseases act without an exciting cause whilst the Y. Fever & such like diseases w^h I only consider as Endemics scarcely ever take place without an exciting cause. —

Endemic diseases are such as affect many peo=

ple together in the same place or Country, & originate from some local cause. Notwithstand^g what has been said to the contrary, I believe the Y. Fever to be an endemic of the U States as well as of the W. Indies. —

Sporadic diseases are such as affect a few only at the same time & place. —

Intercurrent diseases are such as affect a few persons here & there without any regard to time or place. —

Epidemic are such as attack sometimes in scouting parties, but more generally with great pomp & violence. They attack such an immense number of people at the same place & time, as if they were going to destroy the human race — but they can be prevented, repelled & vanquished by the powers of medicine. I exclude from the order of Epidemics, all the diseases produced by the Idio-miasmatic exhalations. The Jail fever never spreads as an Epidemic. — Epidemic diseases arise altogether & invariably from the insensible & foreign matters in the Atmosphere produced by Coino Miasmatic exhalations — & are Small pox, Influenza

Cynanche &c. — The Cynanche Maligna Scarlatina & Influenza may be properly called diseases of the Atmosphere. I will now deliver a few laws to wh. Epidemics are subjected. —

1st They are all influenced by the sensible qualities of the air, the Influenza excepted. The Pox for instance is more violent, & the Measles & Scarlatina Anginosa still more so in summer, than in winter or any other season

2d They are influenced by provisions & drinks of the season — while fruits & vegetables for instance are used, the disease is thrown upon the intestines. —

3d No two Epidemics produced by different causes & of unequal force can affect the system at the same time. I wd as soon believe that a horse could trot & pace at the same time. —

4th When 2 3 or 4 Epidemics appear at the same time & place, they all blend their symptoms together & one of them predominates over the rest & appears to make them pay homage to it by wearing its livery, for there appears to be a mon=

arch in diseases. Therefore Gent: in all yr prescriptions take care to have an eye to the reign^g Epidemic. Hence also we see the reason why broken legs, or any other external cause produce Malign^t fever, when the system is previously disposed to it. A young man left this City in time of the Y: Fever to avoid it, & on his way to Germantown was thrown fm his horse & had his leg broken — he was very soon seized with a black vomit & in 5 days died

5th The more powerful & reigning Epidemics, not only exact homage fm the weaker; but chase them away. Dr Sydenham tells us that the Plague in London in 1665 drove away all other diseases fm the City. —

6th The Tyranny of great Epidemics is lessened before their departure — hence the S-Pox drove the Plague fm Constantinople, & the measles chased away the small pox fm this City. The first appearance of an Epidemic may be compared to a savage that attacks & destroys men women and children, but when retiring, to a civilized corps

of men who spare the blood of the innocent. It is in this stage only that other diseases can take place.

7th They appear in a Variety of Forms & characters 1st As in the Malign.t Bilious; remitting inflammatory intermitting fevers &c in the 3 different forms of S.Pox - viz that with, & without Pustules & the Confluent 2d They appear in different forms in different years, & with different prognosis under different circumstances. 3d The same causes sometimes produce diseases of different forms & appearances - but still disease is an unit.

8th Epidemics vary with respect to their violence in different seasons & persons, & even in different days

9th Some Epidemics require exciting causes, whilst others such as the S. Pox &c do not. -

10th They come on sometimes with great force & violence & suddenly vanish in consequence of frosts & great rains washing away the cause that produced them. —

11th They differ in different parts of the same

Country - In one place it will appear perhaps in the form of Y. Fever, in another of Remitting fever, or common bilious Autumnal fever. - In a third part of the country it will probably assume the shape of a bilious Colic or Dysentery The same Epidemics sometimes affects different people of the same City from a difference of Predisposition - Thus in persons of the Sanguineous Temp.t for instance it will appear a violent fever. In persons of the Alimentary Temperam.t it will fall with all its force on the bowels &c

12th They are often limited to small bounds

13th They affect people of one nation or colour often, whilst others of a different colour & strangers escape. In 1793 the French men, and Negroes escaped the fever of this city. —

14th They sometimes affect persons of a particular age. Moses speaks of a Plague that carried off many children only. —

15th They sometimes affect persons of a particular sex only - A Plague in Italy once carried off 6,000 men

men & scarcely a woman

16th. They sometimes affect persons of particular rank only. In France 1757 the Dysentery attacked the rich whilst the Plague in 1758 attacked none but the poor. —

17 They sometimes attack members of the same communities & families only for the sameness of diet Predisposition &c. —

18th They sometimes affect all nations, all colours, all ages, all sexes at the same time & place

19 They sometimes affect the human species only

20th They sometimes affect the human species together with cats, horses, dogs, cows, sheep, fish, & all the others of the brute creation. —

21 & Lastly — It must be observed that different remedies must be used in the same Epidemic, in different seasons & under different circumstances. They are perpetually varying & consequently no uniform mode of treatment is to be pursued. Their changes must be attentively watched, & our remedies adapted accordingly

This compels a Physician to be a Student as long as he lives. The same remedies wh. cure the same Epidemic one year will kill the next. Bleeding will cure one year & kill the next. —

Of the different Phenomena that have been known to precede & accompany Epidemics

1st Hot, cold, dry & wet, windy weather with rains more frequent sometimes precede an Epidemic

2d Weather perfectly calm, so much so that the leaves of trees were not seen to move & wh. authors have called "Sine Aura" Dr Wilson of Morristown relates the case of an Epidemic wh. was preceded by a long calm, & smoky vapour. — The white paint of houses changed to a Yellow colour in the Y. Fever of Boston. —

3d Diseases wh. precede Epidemics are more violent than at any other time. The diseases also wh. follow always partake of a more inflammatory form, or are more chronic. The Pleurisies wh. have preceded & followed the Y. Fever here, have constantly required more copious Vel & purging than ordinary —

4th Cats appear to be affected in a peculiar manner previous to the appearance of an Epidemic. Birds have been observed to be more scarce, & even die in their cages during the continuance of an Epidemic. Insects are more numerous previous to or during the time of Epidemics. but the house fly is an exception to this, for at such times they mostly disappear. Musquetoes never fail to attend Pestilence.

5th Many trees emit a peculiar disagreeable smell preternaturally drop their leaves, & sometimes die

6th The pulse is preternaturally slow & weak during the continuance of an Epidemic. At one season the pulse was uniformly preternaturally frequent. There is langour, sickness at stomach disposition to sweat &c. Persons who were in good health became sick in consequence of it, but sometimes it happened that those who were debilitated previous to an Epidemic have become quite healthy in consequence of one. The Miasmata in these instances excited them up to the healthy point. Oysters & fish live a much shorter time

during an Epidemic. The clouds affected the Patients in the Y. Fever at Charleston by obscuring the sun. Whence these changes? Nineteen out of twenty diseases are derived from the changes of the atmosphere with the cooperation of Miasmata. If Epidemics are changed by so many circumstances, they ought to be observed with a Microscope every day.

Some persons have supposed Epidemics to be a curse or a judgement upon them. Reason not only rejects but loathes such nonsense. Let old women & children who assemble around a kitchen fire to hear the tales of Fairies & Hobgoblins believe this.

Hear Gent: I have delivered to you such facts as I have acquired from observation & experience, during my whole life, & think it proper here to observe that it is the duty of Physicians to be students as long as they live.

<u>Aliments & Drinks</u> as productive of disease. This is an important part of our Pathology. I have said before that 9/10 of all the diseases are received into the system by means

of the mouth & feet. —

Aliments produce disease by their quantity & quality & 1st Of their Quantity. When great disease is produced by an over distention of the Stomach, & by affording too much nourishment to the system. Too much nourishment disposes to all the diseases of Plethora as Apoplexy &c pavers the way for indigestion & dyspepsia, & lays the foundation for 2 vile practices, viz drinking & using Tobacco The effects of too much nourishment will be in proportion to the exercise taken. A labourer can take much more food with impunity than the idle & sedentary. The quantity of food necessary for a labourer is about 8 ℔ but for a sedentary man from 4 to 6 ℔ is sufficient. the quantity of meat shd be regulated by the quality. The use of aliment is not only to nourish the body, but also to act as a stimulant. Chardin tells us of a Persian, who would eat 35 ℔ of water melon a day without injury. Persons accustomed to a definite quantity become sick when increased or.

diminished — Lewis Cornaro limited himself to 12 Oz of solid food & 13 Oz of drink pr day — By adding 2 lb he lost his health. —

The diseases wh arise from an insufficiency of food affect chiefly children, slaves, & monks who thro a false sense of Religion deny themselves the necessary support of life. Children at the breast are often diseased from the mothers not affording a sufficient quantity of Milk since they are unable to live upon any other food — Diarrhoa Dysentery &c follow — Boarding schools is another great source of disease. —

Slaves are often diseased in consequence of having small allowances, & being made to labour hard by cruel & unthinking masters. Hunger appears to increase the strength. It is said to increase the strength of the Lion very much, who devours 20 lb a flesh a day when he can get it — Stimulus of the desire of life & of food, causes the increase of strength Hunger is said to have great effects upon the temper hence it is said to break down stone walls &c

before it. It was owing to the Strength & furiousness of temper that was supposed to follow hunger that the Duke of Marlborough used to say he preferred Scotchmen when hungry, Englishmen when full, & Irishmen when Drunk, for an immediate engagement.

Famine increases the excitability of the system, excites pain in the Stomach, renders the secretions & excretions acid, & hemorrhage from the Stomach, delirium &c close the scene.

Dr Franklin used to relate the case of a Benjamin Lay of this State, who attempted in imitation of our Saviour to fast 40 days. During this time the Dr visited him & found his breath so acid, that upon shaking hands with him, it drew tears from his eyes.

2° Of the Quality of Aliments. These are Animal & vegetable & first of

Animal Aliments. — Fish were supposed to be the first animal food of man — A diet solely of fish produces lice, leprosy, Itch, Diarrhoea Dys

entery &c. Food wholly Animal produces Foted sweats scurvy &c — & the animal food of Carnivorous Animals produces these effects in a much greater degree, that that of Graminivorous animals — & old animals more than young. There's a great difference between the effect of wild & domestic animals, the former being much the most wholesome. The Indians who live allogether upon the wild are exempted from almost all the diseases to which we are subjected — They are not however so strong, but more active, than those who live upon domestic animals. — Animal food produces disease when much exercised before being killed — An instance of this occurred some years ago. A Farmer killed a beef after working him very hard, & sent it to market — The result was that out of 15 persons who ate of it 14 died — Animal food also produces disease when putrid. — Secondly

<u>Of Vegetable Aliments</u>. Notwithstanding persons in warm climates live upon them; yet in other climates they produce disease. A diet

× Beans are said to be flatulent — Cabbage bad of Digestion

Living on vegetable food however has its advantages — it increases the clearness of the understanding Sir I Newton lived on bread & water while he was writing his essay on Optics. —

wholly vegetable produces Diarrhoa Dysentery, Dropsy, Dyspepsia, Costiveness, a disposition to Gout — lessens the heat of the human body, impairs the venereal appetite, lessens the size of the human body &c. Some are supposed to act specifically on the system as Beans, wt produce flatulency hence the reason why Pythagoras forbade the use of them at his school. Oats are said to produce cutaneous diseases, & chesnuts when green, are said to dispose to mental debility.

Many other circumstances independant of the quality & quantity of food, influence their effects upon the system. —

1st The preparations of aliments in Cooking, materially affect their digestibility. Oysters when overdone have produced Colic, at times death. Milk in its simple state disagrees with many stomachs — a supper of toasted cheese has produced heartburn & apoplexy; & however taken, it always disposes to Costiveness. —

2d Food taken into the stomach without being suf-

ficiently masticated, produces Dyspepsia &c.

3d Too great intervals between meals disorder the Stomach. This shd be avoided by carrying a little gingerbread or biscuit wch shd be eaten between meals.

4 Exercise or Rest influence the food in the Stomach, the former rendering animal food harmless, whilst a vegetable diet is more suitable to the latter. Some Philosophers have ventured to foretel that vegetable aliment will in time become the only Food of the human Race.

5th Eating too much after fasting is a great source of disease. In a convalescent state the most dangerous relapses & even death are brought on by eating too much or taking a small quantity of animal food after having been restricted to a low vegetable diet. This is one of the greatest sources of unsuccessful practice. When families in Europe travel for health, they are sometimes attended by a Physician, who regulates their diet, drink, dress, &c & the benefit derived fm

such a custom is considerable. —

6th The sudden change from vegetable to Animal diet or vice versa, is very injurious to health.

7th An improper mixture of Aliments is likewise very prejudicial to health (see Inquiries Vol 1) However it is best to advise patients labouring under chronic diseases to eat of one dish only at a meal. —

8th Food taken into the Stomach too hot or too cold, produces an inflammation of that organ Dr M. Reid died at New York, by eating ice creams. —

9th Novelty in Articles of diet often produces disease, & that too when the new diet is taken in small quantities. Water melons, peaches &c are not received into the Stomach in the beginning of their season without producing some unpleasant symptoms, & sometimes disease. It appears in this case that the Stomach forgets her old acquaintances, but upon recognising them, soon renews her cordiality. The Stomach sometimes remembers her Enemies for a long time, & scarcely ever becomes re-

conceiled to them: Some years ago, a single boiled chestnut produced a vomiting in me, owing to a great sickness wh I experienced fm them when very young

10 "Food may remain along time in the Stomach before it shews its pernicious effects. I once knew a Lady to be made sick not until the 3d day after taking a small quantity of roasted cheese into the Stomach. I gave her an Emetic wh by discharging the offending matter soon relieved her. Dr Haller says he has known food to remain in the Stomach fm 1 week to 7 Mos previous to its producing disease. Hence Gent: the necessity of inquiring into our Patients food, for days weeks, & even months & perhaps longer previous to the Origin of disease. —

11 Disease may be brought on by eating food cooked in Copper & leaden Vessels &c the first mouthful of such victuals takes away the appetite. Since the introduction of Silver & Iron, Stomach complaints are very much diminished in number. —

also

Also by filth & extraneous bodies getting into the vessels used to convey food into the system. I once knew an instance of a whole family becoming sick by eating a bason of milk, into wh a spider had fallen. —

12th Animal food is sometimes rendered unhealthy for a peculiarity of diet on wh this animal had subsisted for some time previous to its being killed for our food. Some families in Philadelphia were once diseased for eating a parcel of Pheasants wh were brought to market. The Physicians universally attributed this complaint to the cause I have mentioned; & these animals were condemned to be improper & poisonous. The cause of this poison was for the Pheasants eating laurel berries wh is the only food they can get in the winter & is known to give a temporary poison to the flesh of these animals as well as to the deer & some few others. I once knew 60 students at Princeton College to be affected with a Diarrhoa for eating a pye made of Pidgeons wh had chiefly subsis-

Salt produces Scurvy

ted on Poke berries. —

13th Salt diet when well proportioned to the state of the System is not unwholesome. The reason that children living in the country are less affected with Cholera infantum than those of the town is owing I believe to the salt diet used by the Former, whilst the peculiar situation of the latter hinders them from any but fresh food. It were to be wished that our Farmers would live on fresh meat in winter & on salt meat in summer

14 "There is an Idiosyncrasy which renders aliments wholesome or unwholesome to particular persons, & this Idiosyncrasy is hereditary. Many people can't eat fish &c. —

Condiments as productive of disease. These are salt, Vinegar, Mustard, Sugar & spices. —

Salt is so universal and useful an Article of diet that when it could not be obtained, other alkalies were frequently known to be its substitutes. Some nations as the Brazilians & our Indians have never seen salt, but they use in its stead

some alkaline substance. —

2d Vinegar is both wholesome & proper in small quantities. But when taken in large quantities produce Dyspepsia, Gastrodynea, Cholic, a disposition to Gout, & a variety of other distressing Complaints. In 1770 it was said to take down the fat of the system & induce leanness. Some of our ladies then used it very profusely & injured their constitutions materially by it. —

3d Mustard The same may be said of this as of Vinegar. I once had a Gentleman & Lady with a very obstinate Gastrodynea under my care, & happening to dine with them observed that they used Mustard & vinegar very profusely. I advised them to lessen the quantity of these two Articles — they did so, & soon recovered. — Patients often suffer from large quantities or particular qualities of food. Dr Zimmerman informs us that Frederick IId King of Prussia fell a victim to his ungovernable appetite. He was an enormous glutton, who eat 7 times a day, &

took by way of a Relish between breakfast & dinner a large Eel pye. He wd never believe that he ate too much, & when spoken to about it wd always say that he only ate a sufficient quantity to keep soul & body together. He was remarkably fond of Condiments & the same Dr tells us that at 72 years of age his kitchen resembled an Apothecary's shop more than any thing else

4. Sugar notwithstand.g it is the most grateful & nourishing of all Condiments when taken in moderate quantities, yet when taken to excess produces Dyspepsia &c Honey & Molasses when taken in excess also produce disease. —

5th Spices when taken in small quantities assist digestion but when taken in large quantities have a contrary effect. —

We will now turn our attention to the effects of Tea & Coffee. — A revolution has been made in the customs, manners &c of every nation since the introduction of these Articles. —

Tea principally injures by being taken too

strong, hence kitchen women are more affected by it than their mistresses. Tea will sometimes bring on, & sometimes prevent sleep; if the system be below the sleeping point, then its stimulus may induce sleep; but if the system be excited above the sleeping point, it prevents sleep. Tea produces nervous complaints as Hysteria &c when taken very strong & in large quantities — also Gout — hence women are more affected with gout than men, as I shall shew you hereafter. —

Coffee is a gentle stimulus & will sometimes produce all the effects of ardt Spirits. I knew a Physician in this City who always previous to his going out on a visit to his patients in the cold drank a pint of hot coffee. It sometimes produces Vertigo & other diseases; in consequence of wh I always forbid its use in any one of them — Neither tea or coffee are nourishing, they only become so by the sugar taken along with them. —

Of Drinks as productive of disease. These are Water, Wine, Beer, Cider, & Ardt Spirits. —

1st Water is the most wholesome & pure of all drinks; but, like the rest, it is sometimes the cause of disease. It is the cause of disease 1st By its sensible qualities. Cold water injures the tone of the stomach (that is when very cold) by its sedative effects. When the system is very much heated, violent spasms of the stomach arise from drinking very cold water. The teeth are peculiarly affected by cold water. Mr Spence a Dentist in this City, informed me that he drew 3 teeth in summer for one in winter wh may be ascribed to this cause. Water moderately warmed, or suffered to stand half an hour in the air, never produces those dreadful symptoms wh are sometimes its consequences when taken very cold. It also quenches thirst better than when it is very cold; because this last abstracting so much the heat of the stomach leaves the system debilitated; in consequence of wh the system reacts so powerfully, that a fever is produced, & water is again required to compose this fever; whereas water not so very cold produces no such effects,

since the system has not to react & therefore no Fever is produced. —

2d By being mixed with unhealthy particles. Water in Cities is generally unwholesome for the follow.g reason, that the filth in necessaries w.h are deg 30 or 40 feet below the surface of the earth, generally affect the pump water at the distance of several feet from it. It was on this acct that Dr Franklin proposed supplying the City with water from the Schuylkill. Ice in water, beer, cider, & punch will produce death but not in wine or Cordt Spt. I have known a case of death to be brot on by drinking ice punch. General Wayne was affected in 1792 by two large draughts of ice punch. Water is most wholesome when running over beds of sand or gravel — 3d By the quantity & time at wh it is taken. Cold water when taken at improper times injures the system — the same may be said of it when taken in large quantities. Many people injure the system by taking large draughts of water early in the morning, or late in the evening just before

going to bed. This practice comes on by intemperance & is then kept up by habit. It is however a pernicious one, as also that of drinking between meals. The Indians scarcely ever drink water until the evening — Large drinkers of water are generally great glutton

2° Wine has a tendency to produce Gout in the extremities — here I must observe that Gout in the extremities is always produced by fermented or Spirituous liquors — Gout may be induced in the stomach without them; but I never knew a case of Gout in the extremities except in persons who had been accustomed to those drinks. Wine produces Gout more readily in warm than in cold climates, & has a tendency to induce costiveness when taken after supper. It is more wholesome when taken with food than without it

3° Beer like wine, when taken in large quantities disposes to Gout & sometimes to Rheumatism. It has been said to produce Gravel, if so, it is in consequence of its acidity. Dr Haller said that out of 100 patients who died of Gravel, not one upon examin-

ation had been found to use beer

4th Cider may be drank with impunity by la-
bouring persons; but it is productive of Gout & Rheu-
matism in the sedentary. I knew a Gent: & Lady in
whom the gout was always excited by it. The fruit from
which it is obtained is often difficult of digestion & in
some stomachs productive of the same complaints. If
a red hot iron be plunged into Cider & suffered to
cool, its tendency to produce Gout & Rheumatism
is entirely destroyed. The Iron acts by obtunding the
acid. —

5th Ardent Spts or a drink & source of dis-
ease. — See Med: Inquiries Vol: — It may be pro-
per however to observe that their effects are experienced
on the Nerves, Bloodvessels, Lymphatics, Brain &c
also upon the Moral Faculty. — I have elsewhere
said that I wished my Pupils to be distinguished
by their knowledge of & attention to the pulse. I here
say I wish them likewise to be distinguished by their
disuse of Ardt Spts. If any of you ever see a Phy-
sician with a red nose or trembling hands, or see

him in a Tavern drinking brandy &c who calls himself my disciple, Contradict him, I disown him - he is not my disciple but a Brownian - They shd not be used as medicines lest our patients contract an appetite for these detestable articles

Dress as inducing disease. Who wd believe that the dress first used to cover our nakedness, after our fall fm primeval innocence wd be so used as in time to constitute a part of our destruction. The diseases fm dress arise fm the quantity fashion, & quality of our clothes

1st Dress too heavy in Warm weather predispose to disease. -

2d Fashion is often a source of disease, by dressing too thin thick or light. I knew a Lady who fainted immediately after she was dressed to go to a tea party fm being laced too tight in her stays. I believe a great many diseases of the brain are brought on by tight cravats, stiff collars & Garters by preventing the return of blood upwards, cause large knees, Anasarcous legs &c

3d Quality of clothing has a great influence

over the system. Woollen or Cotton clothing is best next the skin. Woollen clothes have many advantages when worn next the skin 1st They keep up a gentle perspiration 2d When wet they are not so disagreeable, so cold, or so productive of disease 3d They may be worn any length of time next the skin without producing vermin provided the other clothing be kept clean. After having considered the diseases of dresses, let us next consider the dresses of diseases 1st Hair powder is a dress of disease, as it was first put on the head in Poland to prevent the Disease Plica Polonica 2° Patches in the face were introduced by some Drunkard to hide the pimples of his part. 3° Neck clothes were first introduced by Henry the to hide the deformity occasioned by the Scrophula 4° Boots were first introduced by Charles 1st to hide the deformity of his legs.

Poisons are of a relative nature from the part on they affect As the vipers poison when swallowed is innocent. Some substances are

poisonous for particular animals while they are food for others; or they are poisons to an animal in one state of the system, while in another state of the system & to the same animal they are innocent. Poisons are such substances wh. when taken into the system produce disease or death. & that they act relatively is proved by the following fact. The venom of a viper has been swallowed without having any effect, but when taken into the bloodvessels it immediately kills. Poisons are only so fm their quantity. A small dose of opium is an agreeable stimulus; but if taken largely kills. Poisons are taken fm either the animal, vegetable, mineral, or aerial kingdoms. It belongs however to Natural History to point out the different poisons. It is my province only to explain the manner in wh they operate. Poisons like Miasmata act by producing local inflammation. The bite of a spider does not kill by its poisonous quality, but by inducing mord: excitem inflammat. &c & their bringing the rest of the system into sympathy with the affected part.

2d

2d In the Vegetable kingdom we have poisons as Nicotiana, Cicuta, Hyosciamus, Digitalis, Lauro Cerasus, Datura Stramonium, Monkshood, Dropwort &c. Buckwheat, so nourishing to man, is a poison to some Animals. Others are less dangerous, as the Cashew nut, wh. acts only upon the skin. —

3° Mineral Poisons are Arsenic &c

4° Aerial, are Aerial acid. Naptho samoil & samoon winds & the different kinds of air unfit for respiration —

Poisons have been supposed to act by destroying a certain something called the living principle; But since we have denied the existence of such a principle, it becomes us to account for its operation in another way. We said that the functions of the system were kept up by certain stimuli acting thereon. In that life is a forced state, & consequently the way we account for the operation of poisons is, that they destroy the parts to wh. they are immediately applied, & thereby destroy the ability in the system of discharging its various functions - They produce in parts whose motions are essential to life an inability to perform

those motions, & their death. They produce this effect in the same manner that a string tied round a bell, or a piece of wax placed round the string of a violin, prevents the emission of sound from either of them. They act on different parts, & are fatal in proportion to the importance of the part affected When they act on the brain & produce death they are taken in by the mouth, & destroy the irritability of the Brain. —

Poisons act specifically 1st On the Mind 2d On the brain 3d On the Nerves 4th On the Muscular System 5 On the Lymphatics 6th On the Sanguiferous System 7th On the Skin 8th On the Stomach & bowels 9th On the Lungs 10th Poisons act generally on the system, as Opium Miasmata &c

Chemistry affords us examples in support of our doctrine of poisons. Mercury put upon gold destroys all its properties of ductility malleability &c. Lime & copper are both within themselves innocuous; but upon mixture form a fine, brittle, sonorous & elastic compound. Many other examples of like

nature might be adduced from Chemistry. May not therefore poisons act upon the blood by mixing with it & destroying its vitality. Formerly we looked up for power to Monarchs & Princes, but of late we have looked downwards & found it to reside in the people, since that time we have become more wise & happy. But not so in medicine. We have all been looking inwards for some invisible principle of life; but the Theory I have offered directs us to seek for it from some external quarter. Since this Theory has been advanced, the Phenomena of animal life seem all more plain & simple. We must now look outwards for the support of life, & like the Indians with their Gods, think we see them in the Clouds & winds. —

There are some poisons wch do not destroy life immediately (these are taken chiefly from the vegetable kingdom) but by a long & lingering illness, exhaust the patient, & thrust him insensibly as it were out of the world. Their Stimulus excites a Hectic or Chronic Fever. — This is the way I explain the

the action of those poisons used in the Southern States by the Slaves to extinguish the flame of life in their masters or Mistresses. The Miasmata wh produce Y: Fever sometimes kills instantly, but it nevertheless may & often does bring on a Chronic fever. There are frequent instances of persons who have been poisoned, arriving again to perfect health. Even Cicuta itself sometimes yeilds to the efforts of the system to recover itself. —

Of Foreign matters introduced into the System as productive of disease. —

Worms fm their universal appearance in all Animals, I am led to believe serve some purpose in the human body, & that when disease is produced by them, it is either by their being in too large a quantity, or by their getting into some improper place. They are found in almost every part of the human body, in the Liver Bladder & Throat, Frontal & maxillary sinuses, Ears Nose, Brain, but most frequently in the Alimentary Canal. The different kinds of worms are the

x They are often found in the Fotus & are produced from the liquor in wh. it floats - Some say they are spontaneously - but this is erroneous - Spontaneous Creation cannot be admitted with detriming the Governor of the Universe

Lumbrici or round worm they are red – The Tenia or Tape worm, Ascarides, & the Ground worm. These may be taken into the system by aliment, or are generated in it. I am induced to believe that only the Lumbrici serve a good purpose in the system, & this may be by consuming the superfluity of Aliment. The effects of worms are seen more in fall than in any other season. Children are more subject to them than adults. Some nations are more subject to them than others. The French Italians & Germans, more so than any other nation.

Worms produce disease only by their quantity, or by their being misplaced, & I am disposed to think that children sometimes get sick for want of a sufficient quantity of worms. They have no effect upon the bloodvessels, hence then you see I deny the existence of worm fever. Worms wh lie dormant during the winter & Spring are frequently roused into action in the fall by an inflammatory fever. The additional heat of the body disturbs them & render them restless, so that instead of the worms causing the fever

it is the fever, we may say, that generates the worms. From what I have said Gent. you may think I believe there are few diseases resulting from worms. I would by no means inculcate such an Idea, I believe there are few diseases of children but what are more or less owing to or accompanied with worms I seldom therefore advise Medicines in Chronic cases cases of young people, without at the same time having an eye to worms. —

Of Anomalous or Extraneous Bodies

introduced into the Stomach, Lungs, Nose Skin &c as productive of disease. — I have known death to be induced by swallow^g a cherry stone. Copper taken into the Stomach produces distress, Nausea &c. I knew a Lady who swallowed a Water mellon-seed wh^ch went the wrong way, a violent Cough ensued, but ceased as soon as the seed was discharged wh^ch was greatly enlarged. —

Children frequently push grains of Coffee &c up their nose, consequences of wh^ch are often very bad, since they often tend to bring on Polypus &c. —

Pins often produce disease by being introduced into a part & not immediately extracted. I attended in Consultation a Son of Mr R Morris, with a sore in the Groin, wh was not benefitted by any application, until a pin was drawn fm it by a Mr Burke who was a member of Congress & then it quickly healed. A Lady in this City had great pain in her Vagina for some time, after a while she discharged a pin fm that part, & was soon brought to her usual state of health. Wounds fm Nails especially in Tendinous parts often induce Tetanus. —

Shot Bullets & Powder frequently produce disease after having remained in the System a long time. I knew a young man who was affected with delirium every 2 or 3 years until a few shot were discharged wh had been lodged in the bottom of his feet when young. —

Splinters are frequently the cause of disease. I attended an officer about the time of the American Revolution, who had a pain in one of his legs, in consultation with another Physician. We both agreed

that he had the Gout & treated it as such. Some days after this, there came from the place of pain a splinter of about 1/8 of an Inch in length wch had been thrust into his feet some years before. —

Paints Powder & Pomatum are frequently productive of disease, such as headache &c —

Retained Excretions are productive of many diseases

Foces when retained for any length of time are very injurious. Their effect however are different upon different persons. Many people go a long time without suffering any inconvenience from the retention of their Foces particularly Sailors. I knew a sailor who went from Philadelphia to Lisbon & back, without having a single passage in the whole time. Dr Haller believes the great longevity of birds to depend upon the readiness with wch they discharge their Foces. There are many instances of persons going a week, month, & even more without a Focal discharge, but in general it disposes to many diseases. 1st Dyspepsia & diseases of the Stomach. 2d The Piles in consequence of Foces hardening

in the intestines 3° Colic, 4° Inflammation of the intestines by their irritation 5° Ruptures as inguinal, scrotal, & Umbilical 6° Diseases of the brain The most healthy time for an evacuation of the fæces is generally once in 24 hours but this period may be exceeded for a short time & no disease produced.

Perspiration when retained produces dyspepsia & eruptions of the skin, sneezing, Colic Diarrhoa &c The following are some of the causes wh produce an obstruction of the perspiration 1st Unusual exercise of the mind 2d Fatigue of body 3d Improper clothing 4th Damp air 5th Night air

Bile when absorbed produces Costiveness, jaundice, inactivity, diseased or false vision, making every object to appear Yellow, obstruction or Schirrus of the Liver &c The Causes of this obstruction are brot on in 3 ways 1st Spasm 2d Calculus or Gallstone 3d Viscidity as in the Y. Fever — The Hepatic bile is a secretion, & the Cystic an excretion 1st The Cystic bile commonly induces costiveness, & the black jaundice 2d Of the Hepatic Bile this produces the

+ Hemoptysis Dropsy

Yellow Jaundice, either from the absorption or regurgitation of bile, & emaciation of the whole system — Dropsy, Nausea, Scirrhus, imperfect blood, white semen. —

Semen when retained, how does it produce disease? I answer it does not unless accompanied with a preternaturally strong venereal appetite, then it may produce Plethora, distention & thereby Hysteria, Melancholy, Madness & Death accompanied with Priapism. —

+ Menses when retained produce a Majority of the female diseases whether of the Chronic or of the acute kind. The suppression of the Menses, produces diseases of an highly inflammatory kind, w^h stand in need of the Lancet, & not of the Pennyroyal Tea, or other stimulating medicines termed Emmenagogues. —

Rest & Motion. Rest by suppressing perspiration is unfavourable to health hence the necessity of imposing on man labour after his Apostacy to eat his bread by the sweat of his brow. This was a blef-

+ Too much motion produces vertigo bloody urine walking blisters the feet creates pain &c — running induces asthma, consumption, excessive labor produces debility predisposing to disease.

sing in disguise &c. Women suffer less than men from a sedentary life. —

Sleep & Watchfulness. Too much sleep produces debility from abstraction, & disposes to fatness, indigestion, fatuity &c. 6 hours in the 24 are sufficient. Wesley who lived to 80 seldom slept more than 4 in the 24. The follow^g circumstances respecting sleep sh^d be attended to: —

1st Posture in bed, head too little or too much elevated predisposes to diseases of the Brain. — 2^d Sleeping always on the back or on one side, to Palsy &c. 3^d Damp sheets frequently generate Consumpt^n — 4th Too small or large a quantity of bed clothes. — 5th Sleeping with our day clothes on 6th In a bed with Curtains — 7th With the head covered — 8th With unhealthy bed fellows, Consumptive persons &c 9th Sleeping with old people. —

Wakefulness is a relative term & depends upon Stimuli, both as to its quantity & quality. The Stimuli of the Passions will often prevent sleep without giving any injury. I knew a card player who w^d —

Intense thought weakens the stomach bowels
brain &c

sit up 2 or 3 days & nights, without having any desire to sleep. Boerhaave once went 6 weeks without sleep. Haller tells us of a woman who passed 45 days without sleep. The want of sleep is owing sometimes to the debilitating passions of Grief fear &c. They act by reducing the system below the sleeping point. But above all wakefulness is produced, or kept up by fever. This state of wakefulness is exemplified in the Anecdote of Gen: Washington, & the Indian Complanter. In an answer to the General's reply, he has the following words. "Your words contained in the great paper you sent me were like the sun in the morning to a fever sick man, wh makes him glad, but does not cure the pain. —

We come now Gent: to an important part of our Pathology viz —

The diseases arising fm the intellectual Faculties & Venereal Appetite. — A gentle exercise of the faculties of the mind is favourable to health, but intense thought brings on debility — 1st When too long continued, or till improper hours. — Thus people who

who set up late are seldom healthy. The Mid-night lamp for this reason ought to be avoided 2d It produces debility when the subject is disproportioned to the ability of the person. —

The Passions are divided into Stimulant & Sedative. The former as Hope &c act Positively; the latter, as Despair &c act negatively. These Passions are divided into chronic & acute, or in other words passions properly so called & Emotions. Sometimes the Passions are Mixed, & then they produce different effects, as ambition with fear &c —

Love produces different effects according as the person is successful or not. Those who are disappointed in love, always love stronger after it, if at the time with their being rejected, there is not something wch will have a tendency to affront. For this reason Gregory in a legacy to his daughters, told them that when they were addressed by a man whom the intended to reject, to give a refusal in positive language, that he may have no possible hopes of future success. Unsuccessful love produces Dyspepsia, Hy-

Anger produces headache. Epilepsy, Apoplexy, &c

Hypochondriasis, Hysteria Melancholy &c—

Joy. — Joy is a powerful Stimulant & will sometimes produce Syncope & even death. The door-keeper to Congress in time of the Revolution was struck dead suddenly thro' joy when he heard of the Capture of Cornwallis. When joy does not produce death, a great depression of Spirits often follow & even suicide. Joy is greater when the excitability has been accumulated by previous fear. There is a species of Joy denominated by the Indians the "joy of fear" — Frequent instances of suicide have occurred fm excess of Joy. The son of the Duke of Queensborough killed himself immediately after being united to the object of his affections. —

Anger is a powerful Stimulant, produces a flow of blood, with many other uncommon emotions of the system, & will even produce death. A shoemaker in this City died thro' excess of Anger, because he could not avenge himself of the injury wh a parcel of boys had done him by blowing tobacco

+ The king of Egypt his son and daughter were taken prisoners the king saw from his prison window his son led to execution and his daughter carrying water in the capacity of a servant but did not weep but when he saw his servant brought forth to be executed his grief was reduced below the weeping point and he wept bitterly

smoke into his room, thro' the hole of his door. Also a Miser whilst he was complaining to his tax gatherer fell dead

Grief acts like a slow poison upon the system. It is one of the worst of sedatives. It produces Dyspepsia, loss of Appetite &c. Grief when excessive will prevent a flow of tears there is a point of grief wt may be called the weeping point above or below wt tears will not flow & Tears flow when excessive grief comes down to the weeping point hence Hypochondriac patients are so much better after the flow of tears, from this, it appears to approach the Hysteria. Persons under deep grief sleep more soundly than at any other time

Fear, when excessive produces a quick pulse, dryness, debility, Aphonia, Asphyxia, Mania, suspension of labour pains, death. Fear causes the hair to rise upon the head, to become grey sometimes in one night. A mans hair became grey in one night, by the excessive fear produced by an earthquake wt destroyed Lisbon in 1755 It acts on the mind & sometimes annihilates the desire of

life. Speech gives energy in time of fear, hence boys when under fear, banish it by talking of any other thing besides the subjects around them. It produces debility & accumulates excitability, hence the reason why cowards perform great exploits. —

Terror is fear in a compound form, when combined with anger. Terror may be defined to be fear embodied. —

Envy acts like a perpetual blister or issue

Ambition is an inflammatory fever of the mind, & has great effects upon it. A Minister of State in Sweden, died of a colic, by being taken fm his place. —

Avarice. Many have died (to use the common expression) in debt to their backs & bellies. — It abstracts fm the love of our country, neighbours friends, relations, servants, wife, children, & lastly our self. The follow^g Epitaph was written on the tomb stone of the Avaricious Archbishop of Canterbury

Here lies his Grace in cold clay clad
Who died for want of what he had.

It

The effects of passions vary in different periods positions it is influenced by age sex rank religion time season climate duration &c.

It is only by a knowledge of the actions of the Passions in a simple & compound state, that a man can have any influence over the minds of others. —

The Venereal Appetite when indulged legally & religiously seldom injures. It injures when indulged by persons too young or too old. The old are not affected unless they have young wives or young husbands. When an old man marries a young girl, he expiates his folly by his death. — It injures when accompanied by obscene books, prints &c. By medicines operating on the organs of generation, as Cantharides, when gratified by onanism; by excess in married men; wt is relieved by Sacch: Sat: or Salivation & low diet. By seminal pollution — in women this produces furor uterinus. — Debauched conversations only take place among men in the decline of life; this appears to be owing to a translation of excitement from the body to the mind. The excitability at this period of life is accumulated, & the excitement diminished — hence they require novelty to produce the effect wt their

bodies are unable to do. And we more frequently find married men prove unfaithful to the Marriage bed after 50 than at any other time of life. The diseases are Dyspepsia Gonorrhoea Consumptⁿ &c

Different Situations as they influence health. I formerly mentioned the diseases of Society wᵗ are divided into the Savage, Barbarous & Civilized, all of wᵗ have their different diseases. As men advance in Civilization, fevers diminish & nervous diseases take their place.—

Different Governments. In Monarchial Governments there is less sensibility than irritability but in Republican the reverse. The Republican Governmᵗ has a gentle influence in acting as a Stimulus, & the frequency of Elections; like chimneys convey off the over flowing passions like the foul air & smoke. The late Lord Chatam fainted after a speech delivered by himself relative to the acknowledgemᵗ of the American Independance.—

Different Religions. The doctrines of the Christian Religion are most friendly to health.—

* From accurate observation in the City of London, the average life of a baker was found to be 3 years. — Smiths of every kind from their exposures to heat & Cold are subject to inflammatory diseases &c.

Christianity is truly salutary, & the Physician who rejects it, ought also reject the principles of his profession. —

Different Employments. Farmers are generally healthy. Carpenters are very long lived, because they labour in the open air. Fevers are more common to these two, & the Scurvy to Sailors. Rheumatism is common to Soldiers as well as to Sailors. Coachmen are subject to disease for waiting out in the Cold for their Masters. Weavers are particularly subject to disease, as Dyspepsia, Hypochondriasis, Hysteria, Costiveness &c. The posture of Shoemakers & Taylors invites to disease. Bakers for their living in damp Cellars, & for their being exposed to the dust of flour are subject to Pulmonary diseases &c. Studious men are subject to headache, Dyspepsia &c. hence this last has been called Morbus Studiorum. Judges are subject to Calculus for the long retention of their urine. Clergymen to Dyspepsia Gravel and Consumption. Lawyers & Physicians are less subject to the diseases peculiar to the other classes of men, in

consequence of their blending the exercises of the body & mind. Country Physicians fm their excessive riding are subject to Costiveness, Piles, Fistula in ano, Rheumatism, Gravel &c. I refer you to Ramazani on diseases of different kinds of tradesmen. —

Different Amusements are hurtful to the system, especially to women fm their stand2 before a glass, or under the hands of a Barber, in a cold room previous to their going out on a visit — Improper change of dress &c. The air of crowded assemblies, dancing, I knew a person who died of a fit of Apoplexy when leading down in a Country dance. —

Theatrical Amusements frequently generate nervous diseases, as well fm the great change in the Atmosphere of public places, as fm the Passions of the mind being roused by Tragedies. There is impression without motion, there is no vent for the feelings, they regurgitate on us, fashion prevents our yielding to their impulse. It is said they excite Charity & Sympathy — on the Contrary, it makes us indifferent to the common distresses of mankind. I your fine Lady who wd weep at the sorrows of a Jane Shore wd turn

from her door a ragged wretch who shd supplicate her charity.

Peculiar Customs as productive of disease. There are a great number of diseases to wt particular fashions & habits of men have given rise. The 1st of these sources is dram drinking in the morng to act as an Antifogmatic. This practice arose from the use of Spirits in the morning for the cure of Intermittents in low & marshy places. It creates a fondness for Spirits throughout the whole day, & lays the foundation for drunkenness. 2d The practice of drinking wine bitters before dinner. This is a dangerous practice. If the appetite be good, it needs not an additional stimulus, & if otherwise, the bitters creating one beyond the powers of digestion, will do harm by bringing on indirect debility. 3d The custom of women receiving lying in visits. The female system is then in a very irritable state, & by no means able to bear the stimuli of Conversation. 4th The tolling of Bells for the ded, has a very bad tendency upon a sick person. 5th Chewing Tobacco — See my Essays. —

Diseases arising from unhealthy Ancestors

These are Congenial & Hereditary. Of the first are many diseases as Measles, Small Pox, Jaundice Lues Venerea, Plague, Yellow Fever, Sore eyes Cancer Gout &c. A child very much like his parents in the eyes & forehead, will very probably inherit the parents disease. Dr Russel says that in time of the Plague at Allepo many children were borne off with the plague wt their parents had.

2d Hereditary diseases depend upon temperament & shape of Ancestors. Consumption is more frequently derived from the Father & Mania from the mother. It is remarkable that the consumption seldom appears before 20 or 21 & madness not before the age at wh it attacked the mother generally in the decline of life between 60 & 70. When the Parents have been afflicted with Gout half the intemperance will bring it on in the Children. Gout Hysteria, Hypochondriasis & Leprosy are all Hereditary diseases. Besides Congenial & Hereditary diseases, there are family diseases as Epilepsy, Palsy, &c There are many instances of dis-

cases skipping 1 or 2 generations & then shewing itself. You must not then confine yourself to the parents in searching for the source of diseases, but you will often have to go back several generations. A regard to the operations of Medicines in Hereditary complaints is necessary. What was good in the same case in the ancestors for there are family medicines as well as family diseases. This is of such consequences, that I wish all those who have diseases communicable to children w^d likewise leave with them, the remedies they had found useful. —

<u>Diseases</u> arising from the improper use of Medicine. These have arisen chiefly f^m an injudicious confidence in false systems of medicine & wrong ideas in the operation of medicines. The false systems of medicine f^m Hippocrates to Brown have slain their thousands in the hands of weak Physicians. That Physician perhaps will have the most success in his practice who borrows a little f^m all the systems. Many hundreds have died in consequence of the publication of Dr Cheyne on regimen

by living on diet so low as not to be sufficient to support life — from taking Opium on the supposition that it was a sedative according to Dr Cullen Opium in large doses produces all the symptoms of Malignt fever. — From a confidence in the Asthenic diseases of Brown. But think not Gent: that I do not hold out for a theory in medicine. There have been & still are many false theories in medicine wh have done much harm. But we ought no more to reject entirely the truth of theory in medicine because of the different spurious ones; than we ought the true religion because there are many false & injurious ones in the world. —

The injudicious confidence of the operations of Nature is also a cause of many deaths. This injudicious confidence is just as absurd as to believe in Witchcraft or Animal Electricity. One grand Argument in favour of the operations of Nature is that she is the only Physician of the Brute creation; but this proves too much — Brutes seldom recover from a slight disease, such as we could cure in many by the application of a few simple remedies. But in this

The too frequent use of glysters destroys the sensi=
=bility of the lower bowels

this enlightened age, Nature seems to be the Pagoda of many Physicians. If the regular bred Physicians have done harm by the means just mentioned, how much more must have been done by the

Quacks & Mountebanks. I once saw a dialogue between a Sword & Rum Hogshead, disputing which had done the most in destroying man. Had a representative fm the quacks stept forwards he wd have gained the palm with ease.

Diseases arising fm the imprudent or habitual use of Medicines with or without the advice of a Physician.

1st Purges. These when given too often dispose to Costiveness & thereby call oftener for their exhibition. Different kinds of Purges do injury to different parts of the system. Aloes dispose to Piles. Butternut pill disposes to Vertigo. Palsy &c Glaubers salts to a debility of the intestines. Purges are often given to prevent eruptions &c but abstinence fm animal food wd be much the best.

2d Emetics. The habitual use of these produ-

ces Dyspepsia, also other complaints of the Stomach, & by that means affects the general system; they produce ruptures of all kinds. —

3d Bitters induce indirect debility, Dyspepsia &c & dispose to drawdrinking &c Exercise is the best of all tonics with a well regulated diet. —

4th Nitre has produced Dyspepsia, a disposition to colic &c

5th Bf used in the spring without disease induces Plethora, Apoplexy &c Abstinence in the Spring is much to be preferred

6th Sedorifics habitually used injure the System

7th The imprudent use of the warm or Cold bath disposes to many diseases, but when the warm bath is used in the predisposing or forming state of fevers, it is an excellent & valuable remedy. 8th Pediluvium when indiscriminately used as often does harm as good, in predisposition to disease, it has been of immense service, but when Morb: excitemt prevails, it produces delirium, & increases every symptom. A Pint of wine will do as little harm

when the disease is formed as Pediluvium

9th Diets & Drinks suggested only by false theories of Medicine produce many diseases.

10th Exercise in excess is hurtful especially in Fevers.

11th Quack medicines of all kinds have swelled the bills of Mortality. Thus Godfreys Cordial has destroyed many children. I have seen it one destroy a child in this city. Turlingtons balsam has produced inflammatn in the bowels & even death. Even the so much famed Portland powder has done considerable mischief. James's Powder Puked & Purged to death Goldsmith & Howard. But sometimes Medicines produce mischief in the end, when they appear to do neither good nor harm in the beginning, & that too in the hands of Judicious Physicians. This arises from a peculiar Idiosyncrasy in certain constitutions. hence Gent. you may see the impropriety of blaming your Brethren in Medicine too hastily. ——

Sympathy & Antipathy as inducing disease. This Gent: is a difficult subject. That sympathy sh^d exist in minds is easily imagined; but that it sh^d exist between bodies is not easily imagined. The diseases of sympathy in bodies seem accountable for upon the consideration that man is an imitative animal. This principle of imitation, is a deep seated principle in the minds of most of the human race. It is to this that I refer yawning & gaping w^h are so infectious in large assemblies. To this likewise I refer the sore eyes w^h sometimes arise from viewing those that are sore. Even convulsions have been communicated by sympathy also stuttering the fakes as they are called &c

But how shall we account for that intuitive evidence w^h some people discover in finding out events to w^h they are entire strangers as to any external cause. Dr Johnson says that Lord Roscommon when a boy at school in France was suddenly when at play impressed with the Idea that his father was dead, who was then at the distance of more than 300 miles from him. True it was his father

× I knew an instance of this same kind of Antipathy in one of the bravest men in the American Army yet the sight of a Cat wd drive him fm the head of the Regiment — He died with this Catphobia —

All apociations are the effect of visible or invisible motions

The apociations of motions exist in the body 1st By apociation of Ideas — 2d Without this aid

died at the time in wh the Idea struck him. —

Antipathy is often congenial, & acquired. Some men are born with an antipathy to water, as Peter the Great, while King James 6th was born with an Antipathy to a sword — Others to cats, dogs, rats &c — I once heard of a man who could even tell when there was a cat in the room without seeing or hearing it — This must be owing 1st to certain effluvia of the Animal he hated — 2d from Association. — All these people are rendered liable to disease fm their Antipathy wh other people are exempted fm For instance a person having an Antipathy to a cat will be excessively agitated & perhaps made sick by being confined in the same place with one, but this wd have no effect on an ordinary person ×

Diseases arising fm the Association of Ideas & Motion. — Of the former it is well worth attending to — There is scarcely a disease in wh this association is not present. Of the latter they are numerous — 1st If a man accustom himself to make water just before going to bed, he will be

sensibly affected by omitting it once. 2d A Lady who took Muff profusely, was at last taken with a Palsy, & became incapable of raising her hand to her face, wh. she could very easily do when Sal: Cornu Cervi was applied to her nose. these 2 facts are sufficient to prove the powers of the association of motion. It is by this association of motion I account for the periodical returns of Intermittents &c. That it is so, is proved by these paroxysms being prevented by exciting a new action or mode of association in the System. Thus riding on Horseback cures Intermittents by breaking the chain of association, Salivation & travelling has had the same effects in Epilepsy

Diseases from Accidents. I once saw a Case of Hydrocephalus Internus brot on by a stroke of a hammer on the head 18 mos. previous to it. And another of pain over the eye in a man who had been frequently raised by the head when a child. Mr. Campbell was taken Maniacal at 23 from the kick of a horse wh. he recd. at 15. You see here that we have to go back, days, mos.

Seven years for the remote causes of disease. — See Bell's Surgery for diseases of this kind. —

Diseases of Time or Old Age. See my Inquiries — I shall however mention such facts as have occurred to me since their publication. 1st The state of the Stomach greatly influences Longevity — I never knew a man live to be old who was subject to stomach complaints — W. th^d never eat what disagrees with our Stomachs — It is the Conscience of the Body. The signs of a healthy Stomach are 1st An appetite, & an ignorance that we have one — 2^d That we hear no more of the food after we swallow it i.e. no signs of flatulency, heartburn &c

2^d Migration influences the approach of death. Old persons frequently prolong their lives by migrating from one country to another situated in a more southern latitude — Europeans by coming here after they are 40, generally add several years to their lives

3 However long some people live, few of them die of old age. It is computed that 78 out of 1000 die of old age — 4th It is computed that only 6 out of

The cartilaginous state of the cranium disposes them to diseases

+ From the great irritability of the stomach and bowels

100 reach 60 years — 5th More women live to be old than men, but more men to be very old than women.

Predisposing Causes of Disease.

These are either Natural or Artificial. The Natural occur in different ages & conditions of the system as

1st Infancy. These arise from the disproportion of the head, & consequently the greater determination of blood to that part — Hence eruptions behind the ears — Lenia capitis, apoplexy, Hydrocephalus &c. Infants have also less sensibility, but more irritability than adults — hence they are more disposed to convulsive diseases of the bowels Stomach &c. Dentition not only produces painful & swelled gums, convulsions, restlessness &c, but I have seen it produce swellings of the inguinal glands & Gonorrhoea. Worms, tenderness of the skin, passions &c all become the source of disease in infants. It is computed that half the infants die under 7 but more certainly ten years

2d Childhood & Puerility. The diseases of infants are nearly applicable here, irritability still

Children are less subject to stomach complaints than infants but more disposed to Croup

predominates over sensibility. One half of the children born, die before the age of puberty, more die in warm than in cold countries; more among the poor than among people in easy circumstances. More boys die than Girls

3d Puberty. In this sensibility begins to get the upper hand of irritability. Here febrile diseases of an inflammatory nature begin to take place, as Phthisis, Catarrh, Dyspepsia, Hypochondriasis Hemorrhages &c. Most of these diseases may be prevented by V.S. Purging & low diet

4th Adolescency & Manhood takes place at 18 & continues till 36. The diseases of this age arise from a determination of blood to the organs of generation. They are diseases of the Stomach, Dyspepsia, Hysteria, Hypochondriasis. Pain in the limbs & joints, swelling in the Neck & Groin, giddiness in the head, & those wch arise from the exercise of the venereal appetite. From the 36th to the 46th year of our life the venous plethora prevails over the Arterial. From 40 to 57 there is better health more happiness

& fewer deaths than at any other period. The excitability & excitement being equally proportioned to each other. But old age soon comes on the menses in women now cease - this disposes to many diseases. As soon as man begins to wear spectacles, he may be said to have put on a part of his shroud, & when he rises in the night to discharge his urine, he may then be said to have advanced the first step to his grave. From 57 to 63 the system is predisposed to bilic vertigo & apoplexy - from 63 the system gradually decays - it is then that a second childhood is produced, & here again excitability predominates - thus a man who at 40 wd drink his bottle of Madeira, wd - when at 60 or 70 be intoxicated with 3 or 4 glasses. It is at this period that the grasshopper becomes a burthen. - They are more disturbed at trivial incidents, & are more sensible of the changes of heat & cold. After this, as the body advances to 80 or 90, the sensibility of the nervous system decreases, & the excitability of the arterial system increases, & the body is very liable to inflammatory complaints - the excitability of the

whole body seems absorbed by the arteries. Drs Chovet & Franklin died of an acute inflammatory disease between 80 & 90. The fluids of old people become acrid by age; as the tears, urine, gastric juice, mucus of the nose &c. Hence trifling sores often terminate in Cancers at this time of life, & bruises end in Mortification. Here muscular weakness also attends hence the shaking of the knees head & hands

<u>The diseases of Old People</u> are Chronic & Acute. The former attacks 1st The Blood vessels 2d Nervous. 3d The Muscular System 4th The brain 5th The Alimentary Canal. Some old people take a pride in shewing their strength by standing & exposing themselves to cold: by this they not only often suffer sickness but even death. Few people die of old age they are frequently said to die of old age, but when this is the case they leave the world without pain; & death is nothing more than a sound sleep. Dr Priestly told me that his father died of extreme old age alone. He was sitting in his arm chair surrounded by his family, & the last words he uttered were "that

he felt no pain whatever" & with these words breathed his last.

Conditions of the system in single & married life as predisposing to disease. —

Married people are generally of longer life than single. Single people are more subject to Hysteria &c. Women are disposed to disease fm disappointments in love. Men are often diseased after marrying, but this is not the case with women — Cetera Paribus — a greater proportion of single men & women die in a given time than married

Barrenness is often a source of disease. I once knew a barren lady who upon seeing a pregnant beggar said — "I would be that woman with all her rags if at the same time I could be with child"

Batchelors live a hypochondriac life. It has been said that a batchelors life is a good breakfast, tolerable dinner, but a very bad supper. Pregnant women are subject to acute diseases. The Consumption is suspended during pregnancy, because the inflammatn of the Uterus is so great as to take the determination fm the Lungs! But when the Uterus is relieved of its distention, many

other diseases may arise from the abstraction of its former stimuli. Pregnancy predisposes to Costiveness, Vertigo, Mania &c. Suckling children to Consumption & a suppression of Milk to cancerous tumours &c. There wd be few Cancerous Uteri if Vs were more used about this time of life. Some diseases are apt to produce abortion, as Influenza even when moderate, while the small pox & others of a more powerful nature do not. The menses cease to flow between 45 & 50 then the system becomes plethoric, & disease may be prevented by occasional Vs Purging, low diet & exercise

Deformity in size, or the configuration of the whole or any particular part of the body predispose to disease. People uncommonly large or small are apt to be short lived. Very tall men accordg to Dr Darwin seldom live over 25 or 27 years. Dwarfs are generally short lived. The followg is an exception to this - the dwarf that was brot from Germany in the time of George 1st lived 80 years Those who grow very fat before 40 are generally

short lived. Large heads & short necks dispose to Apoplexy. Narrow chests to diseases of the Lungs. Montaigne says that deformity of particular parts dispose to an increase of the Venereal appetite. Women suffer less from deformity than men. Congenial weakness of a part, or of all the body dispose to disease. The present King of England is only a 7 Months child, but by his temperance has reigned many years. One disease badly cured disposes to another. thus Pneumonia badly cured disposes to Consumptn. Intermittents to Jaundice, Dropsy &c. Of all the parts of the body the Stomach, Liver & Spleen are the most susceptible of disease. —

I must not conclude this subject without taking some notice of the Cause & Phenomena of death. — Death follows the absence of Stimuli wh. support life — These stimuli losing their effect by repetition, the excitemt. being smothered as it were by the excessive force of impressions &c. Morbid excitemt. just before death fixes in suc-

cepion on different parts of the body. Falling upon the Brain it elevates the genius above its ordinary exercise, gives occasionally more talents, as a talent for Poetry Music &c. Resuscitates dormant impressions, so that a language long since forgotten is spoken again, produces delirium, & a perversion of the Moral faculty even in pious persons. Transferred to the Trachea & glottis Morb: et: just before death produces a very strong voice, the rattles &c. On the Stomach a wonderful appetite is excited just at the approach of death. On the Senses rendering them more acute. On the Fauces producing thirst. On the Bowels producing Diarrhoea. On the Kidneys suppression or an increase of urine. On the Lymphatics. hence the effusion or absorption of water in Dropsy just before death. — On the Muscles it produces rigidity in them & Convulsions. To the Penis producing Priapism. — To the Arteries producing activity of pulse at the wrist. Morb: excitent just before death

whether fixed diffused or flying is frequently attended with great pain, nt pain is constant or attended with intermissions. Death from old age is never painful - sometimes at death Mob: excitem^t becomes stationary at the point of pleasure, & the person feels pleasure while dying. Death is often attended with great fears of futurity, but sometimes even the most wicked are unconcerned about futurity. The coldness attending death generally begins in the toes & fingers, but sometimes in the wrists. There have been many disputes about the Ultimum Moriens I am of opinion that this depends very much on the nature of the disease the persons die of. The Stomach & bowels generally retain their irritability for some time after death - tho I am disposed to believe it continues for some time after the action of the Heart & Arteries - & respiration have ceased. - Heat & Colour often fluctuates in the body for 2 or 3 days after death. A yellowness of the skin often takes place at the moment of death. The pupils of the eyes become less. - The Muscles generally speaking

are the ultimum Moriens. —

This Gentlemen finishes our Pathology, & I again repeat that there is but one disease, morb: excitement; — but one Predisposing cause — debility; & but one exciting cause — an irritant.

Therapeutics

Gentlemen,

After having considered the Remote Predisposing & exciting causes of disease, we proceed to Therapeutics, & view the system in a morbid state with the debility predisposing & following disease. Therapeutics may be defined, the art of curing diseases, founded on a knowledge of their causes. Chemistry Mat: Med: Anatomy, Physiology &c are all valuable only because they throw light upon the practice of Physic & cure of diseases. All these branches are necessary to be understood by a Physician & also Surgery & Midwifery. Therapeutics or the art of curing diseases I have always considered as a Science. Medicine has improved in proportion as it has become a Science, & received aid from other auxillary sciences. I shall not give you a particular history of Medicines & their doses, that I leave to Dr Barton. I shall only give you a

general act of the tools or medicines you are to use, & the manner of using them. —

The first article in our Syllabus on Therapeutics is respecting the powers of Nature in curing diseases. What is at present called the supposed powers of Nature was the Anima Medica of Stahl. The supposed powers of Nature arise entirely from Physical Necessity. —

1st There are however cases in wh nature cures diseases, such as in fevers causing a dislike for food; in Hemorrhages by causing faintness & consequently a Collapse of the vessels, & in wounds by supplying new bones & flesh. —

2d There are cases in wh Nature is too weak & feeble to do service as in Malignt fevers

3d In others, she is not proportioned to the disease, as in Cholera Morbus. & Dysentery

4 Entirely idle sometimes, as in Chronic Gout, Epilepsy, Mania, Cancer, & Syphilis. —

5th Sometimes does Mischief as in Dropsy & Consumptn

6th Sometimes refuses her aid, as in Aneurism & Scirrhus

7th Sometimes excites less pain than is proportioned to the disease, as in Tetanus, & sometimes more, as in Toothache & Whitlow.

8th Nature is weak in the diseases of domestic Animals for in these, disease & death are very nearly connected, especially in Epidemics. —

I am not the first who opposed the operations of Nature in curing diseases. Sydenham & Meade were long ago opposed to it. The efforts of Nature in the cure of Diarrhoa & Pleurisy bear no resemblance to the action of Opium & the Lancet, wh are our sovereign remedies. Nature in health, is like a man in his senses, but in disease like a madman. In disease she may be compared to a drunken man in a dark room, who after finding the door, stumbles against it, breaks it down & ends his existence at the same time. In short when you are called to prescribe in acute diseases, you sh^d serve nature as you wo^d a noisy cat or Dog in a sick room - i.e. turn her out of doors. In the cure of diseases however, the operations of nature may be attended to, but

not trusted. In Epidemics, if the bowels sh^d be affected & show a tendency to carry off the disease by discharge, this operation sh^d be assisted by the operation of purges. If hemorrhage f^m the nose attend the disease, V.S. will be proper. If boils or eruptions on the skin appear, substitute an artificial disease on the surface. If sweats accompany the disease, sudorifics sh^d be administered. If sore throat or a disposition to cough attend, mercury sh^d be administered to expel the morbid matter. You see then Gent: that Physicians sh^d be the masters & not the servants of Nature as Hippocrates said. —

One outlet to a disease sh^d not be solely depended upon, altho' it may be sufficient in a few very mild diseases, yet every avenue & outlet, thro' w^h it might possibly escape sh^d be opened

In Epidemics we ought to pay particular attention to the Climate & all local circumstances, to the seasons of the year, heat & cold, dryness & moisture. There are no successive Epidemics perfectly alike in different years, consequently the practice sh^d be suited

to these different circumstances & regulated by the National temperaments, habits dress, customs &c. Attention ought always to be paid to the country from whence the persons came. Intermittents when they attack a native of Ireland frequently require Bf. and seldom yeild to the bark after he arrives in America, until the use of the lancet; while in the Natives of the Middle states, intermittents generally yeild to the Bark alone. The particular desires & longings of the patient shd also be always attended to. In the time of the American Revolution, the soldiers of the Eastern states were affected with Nostalgia, while the Virginians longed for salt bread & corn pork. Appetites however singular shd not be neglected; nor are the forms of Governmt or Religion.

There are some Diseases wt shd not be cured by art, as eruptions on the heads of children — these shd not be cured unless some other mode be instituted to carry off the disease. — The Bloody Piles in old people shd not be cured, unless we substitute some vicarious discharge from the body. — Intermittents

succeeding Madness or Palsy sh^d not be cured. Dr Bond advises his Maniacal patients to visit a marshy country, & thereby get the Intermittent as a palliative of Mania. But Qy. in this case w^d have been much better. Diarrhoea often sh^d not be cured. Gout & Rheumatism succeeding Melancholia and Mania sh^d be cherished. Dr Mouro had a daughter that was twice taken with Mania upon the retrocession of the headache. Old letters or sores sh^d not be cured up because Apoplexy or Palsy often succeed a sore thus cured, unless some vicarious discharge be substituted. Death has been often brought on by curing sore legs in old people.

Individual Temperaments & Idiosyncrasy, & habitual diseases & sh^d be attended to ?

Ascites sh^d not be relieved by tapping after remaining a long time, for it is rarely cured by it I have seen death succeed tapping after a few days, beside the Sympathies are sometimes roused into action, & cures. Gonorrhoea sh^d not be cured when it has suspended diseases of a more violent

action. Habitual Sweats from the feet sh^d not be cured

Pain in some cases sh^d not be cured, but these are very few — Pain becomes sometimes a necessary stimulus from habit thus the extraction of a decayed & painful tooth has produced a fatal chronic disease.

Individual Temperaments & Idiosyncrasy & Habitual diseases & Habitual Remedies are not to be left out of consideration — Remember the Old & vulgar proverb "Whats one mans meat, is another mans poison — We frequently lose & acquire new predispositions in the course of our lives.

In Chronic & Hereditary diseases you sh^d look back as far as the 2^d or 3^d generation

Whole families are sometimes carried off by diseases contracted by peculiar habits — Witness Dr Craigs family of Alexandria, all whose children have died with consumpt^n whilst both his wife & himself remain in good health. —

The age of men, the state of their hemorrhoidal vessels & the Catamenia in women are not to be overlooked — Worms in children sh^d be had in view in our prescriptions — The diseases of children are more successfully treated by Emetics, than those

of Adults, & they will bear larger doses of Calomel under dentition than at any other period of life

There are often recent causes of disease w^h Physicians th^d always have in view, as hard drinking, intemperance in eating, guilt, debt, love, envy mortification &c w^h th^d be sought for f^m their friends, acquaintances or enemies, & not f^m the patient himself — The Habit diet & Medicines of our Patient th^d be enquired into — A diet of vegetables, will not answer to recruit a Convalescent "bon vivant" who has been nurtured on Roast beef & Plum pudding. Patients frequently deceive themselves with regard to the temperance — Case of a West Indian who laboured under some obstinate chronic complaint, upon being questioned about his mode of life, observed that he was very temperate — I asked him to explain what he meant by temperance "Why" says he "when I dine at home I never exceed a bottle of wine, & when I dine out, w^h is only twice a week, I generally bring away my 3 bottles with me. —

Physicians must frequently look back months & even years for the causes of disease. The removal of the remote cause as Celsus says, (for these are his words "sublata causa, tollitur effectus) will not cure the disease; for the Hydrocephalus internus of children to wh worms predispose is not cured by the removal of the worms. In the treatment of diseases, hope, as far as consistent with truth & reason shd be inspired into our patients; for it is the best vehicle of medicine; & the greatest circumspection is necessary that not even a doubt be expressed, for it defeats the intention of medicine. — The principle of faith shd also be attended to — hence quacks so often succeed in the cure of diseases. —

The predisposing cause of all diseases is debility wh appears to be a Mechanical power in medicine. — There are perhaps no diseases wh do not appear to have alternate exacerbations & remissions, wh sometimes require different & even opposite remedies. In the first case sedatives are necessary — In remissions debility is frequently present & re-

quires the Administration of Cordials. In Chronic diseases, the patient sh^d regularly take his medicine. It is frequently of very great importance to advise patients to continue the use of their medicines even when they feel the least want of them. Debility is not confined to days, weeks, nor to its forming state, it frequently succeeds disease; in w^h case the patient sh^d continue the medicine w^h cured the disease, for months & even years. Disease may be compared to a garison the besiegers of w^h sh^d never be idle, unless there be a certainty of bringing on a capitulation by starving the people contained therein. —

Choice of Medicines. Formerly they were thot to be valuable in proportion to their prices — I suppose that all diseases may be cured by few medicines, w^h by being better known will be more certain in their effects — An advantage frequently arises f^m concealing the names of Medicines

Respecting the Operations of Medicines, 2 opinions have prevailed — One is that they act

Cancer cured by corrosive sublimate and Hemlock by Dr Aikin when neither of these remedies would do it alone.

more certainly in a simple form while others contend for the advantages arising from combination. These opinions appear to be reasonable. The Bark Opium &c are generally best when exhibited in a simple state - while Sugar enables the Stomach to retain medicines wch it wd otherwise reject. In this case a weak pleasurable sensation overcomes a powerful disagreeable one. Bark & Valerian combined will cure certain headaches, wch when seperate wd avail nothing. In this case, it may act in one of these 2 ways. 1st By a change of their natures, & the formation of a Tertian Quid. or 2d One of the medicines composing the compound may excite the Stomach to the point, in wch the other can act. Opium & Alkali when combined will cure certain cases of Tetanus, yet when seperate avail nought. Dr Fordyce contends for the advantages arising from compound medicines & says that Alum is a greater Astringent when combined with rose water than when alone. Dr Hall also contends for the Combinations of Medicines

& says that some medicines are strangers & enemies to the system, & sh^d not be introduced into it without their guides or Spies. Squills & Gum ammoniac when combined, form a better pectoral than either of them seperately. —

Tartarized Antimony & Specac: form a better emetic than when seperated. Capsicum & pepper give no heat & pain in the Stomach, as they do when seperate. — Neatness & Cleanliness sh^d be greatly attended to in the preparations of our medicines. Writing the name of the Patient on the paper of Medicine sh^d always be done. Med: require their Condiments as well as Aliments. It is of consequence to recollect the different effects of Med: on adults & children. for Sacch: Sat: will cure Epilepsy in Children but not in Adults. Drawing the mind from itself, or in other words drawing off the attention of the patient from his disease is very beneficial. Dr Cadwallader was very successful by this practice. He once by his great humour prevented a man from committing sui-

cide. The tone of conversation sh^d be suited to the state of the mind - hence mirth is sometimes beneficial & sometimes prejudicial. Mentioning high priced medicines to persons who are unable to purchase them sh^d always be avoided. It is our duty to attend to all the cases to w^h we are called, whether they seem to be desperate or not. In prescribing a doubtful remedy for a desperate disease, we sh^d do well to imitate Dr Cullen, who once requested a Clergyman to advise Vf. when he was afraid to advise it himself. A Medicine sh^d never be laid aside until all the different preparations have been tried. Opium will frequently lie on the Stomach when Laud: will not. — Med: are frequently rejected fm apprehension, hence the necessity of sometimes disguising our Med: as the preparat^n of Mere^s. The best med: that can be used is sometimes no medicine at all. If unfortunately the patient is constantly wishing to take medicine feed him up with bread pills, or some other convenient Article

3

on w^h he th^d be encouraged to place confidence
Physicians th^d never advise patients to make their
wills, for they might as well pass sentence of death
upon them; but they th^d always inform the
friends of the patient concerning his danger,
that they may be prepared.

Concerning the operations of Medicines there
is more fallacy in the Opinions of Physicians than
on any other point. Dr Fordyce says that the best
effects of Antimony in fevers is to produce a Relax-
ation of the skin, whilst Dr Cullen thinks that
Nausea is of the greatest advantage. Since we re-
ject empyricism, we must always prescribe for
the symptoms of disease — Tar Consultations, like
compound medicines, may be useful in some dis-
eases they th^d always be resorted to

1st As Iron sharpens iron, so will the opinion
of one Physician spirit that of another

2^d Novelty of 2 or more Physicians may inspire
hope & even confidence in the Patient

4 3^d Responsibility is divided between the con-

1st appears in sprightliness pleasure sense of appetite &c –

sulting Physicians

Cases in wh a Consultation is Necessary. — 1st In doubtful cases 2d In dangerous tho' not doubtful 3d In uncommon cases 4th In desperate cases 5th When new medicines are supposed to be proper 6th In cases where there will probably be an appeal to justice for the life of a patient shd not depend upon the testimony of any one man; or at least a Physician would not be willing to bear testimony alone, when the life of a human being depended upon his opinion — In consultations choose Physicians whose principles are similar to yr own. Two modes of practice tho' each may do good when seperate, yet when combined always do harm — We come now to

the Application of our Principles

1st The first effect of impressions on healthy excitemt is to elevate it up to 60 on our scale, & produce preternatural excitemt Remedies, gentle Physic & in some instances Vs. —

2d Debility from action is produced by a

3d Remedies rest. gentle evacuations and stim=
=ulants or both of these

longer application of impressions. the system is now at 40. If you abstract or add impressions the effect is the same, viz, debility. When debility precedes disease. the remedies are rest & gentle stimulants. these sh^d vary accord^g to the seat of it. Debility when it falls upon the Blood-vessels, requires different stimulus f^m what it does when it falls upon the Sympathetic system.

3° Depression, the system is now at 30. these states of the system are attended with accumulated excitability, if the impressions act suddenly

4' Disease or Morb: excitement is produced by a still longer application of impressions; but if these impressions act gradually, both excitement & excitability are worn down, & no disease is produced.

5 Oppression or Suffocated excitement, the system is now at 20 —

6' Prostration — The excitability is now smothered or absorbed, & the system cannot react; new and different stemuli must now be used to rouse the latent excitability, w^h is enveloped as it were &

7. Remedies. Obstruents

will not emit the motions of life. —

7th Disorder —

8th Death —

When debility is suddenly induced, it is attended with accumulated excitability, & shd be treated with low diet, rest & gentle medicine; but when debility is induced gradually, we must gently stimulate. Elevation shews itself by alacrity, wakefulness & an increase of appetite — Depression is followed by a tendency to disease sometimes, in this case depletion shd be used, but when there appears to be no tendency to disease stimulants shd be used. We must equalize excitement & divert it fm vital parts by depletion & stimulants. —

Medicines have been divided into Sedatives & Stimulants — The first class viz: Sedatives act by abstracting & reducing morbid excitement — The second class act by equalizing excitement by creating a new action — by diverting it fm parts more essential to life, to those wh —

are not so much so, by rendering it natural, & to diffuse it equally.

Sedatives are divided into 1st Direct - 2d indirect - & 3d those wh obviate the debility succeeding disease as the class of Tonics. - Those wh act directly by lessening the stimulus & abstracting Morb: excitemt are

1st Bloodletting

2d Cold, applied either by air, water, or ice when the system is above 96, & then dry - useful in Muscular diseases Hysteria &c

3d Fear This reduces Morb: excitemt by abstracting the stimulus of Courage - Fear may operate in curing Singultus by the abstraction of Morb: ex: from the Diaphragm

4th Abstinence - This is of different grades 1st - Refraining from fresh animal food - 2d from Poultry 3d From salt meat - this is not so nourishing as fresh meat since so great a quantity of it cannot be taken - 4th from fish - 5th from eggs - 6th The less now

rishing kinds of fish & the different kinds of shell fish - 7 - Vegetables - 8° Farin milk & saccharine Matter - 9° Fm liquid aliments of all kinds - 10° Mucilaginous Substances, Gum Arab: 11° Total abstinence. - Abstinence acts in 3 ways - 1st By lessening the fulness of the bloodvessels & thus diminishing all the secretions - 2° By abstracting the stimulus of food - & 3° By creating, when great hunger is induced a new action & thereby diminishing Morb: excitement —
The operation of abstinence is too slow in acute, & is only to be trusted in Chronic cases; & in those cases of debility where it increases excitability & thereby leaves greater room for the action of Tonics.
The 3 follow^g facts with respect to abstinence sh^d not be forgotten - 1st The Indians abstain much fm food previous to a battle, hence so few of their wounds prove fatal - 2° Animals fasting some time before their death are after death less predisposed to putrifaction - 3° We always bear fatigue after a vegetable diet or abstinence, better than we eat plentifully of Animal food. —

5th Rest abstracts the Stimulus of Muscular Motion
6th Darkness abstracts the Stimulus of light
7th Silence - the Stimulus of Sound -
The abstraction of excitement shd always be performed in a gradual manner; hence the saying "Natura nihil fit per saltem". —

Here we will premise a few propositions

1st I believe there is an action of Specific Stimuli

2d That Stimuli act on the whole System thro' a particular Medium - Here the Stomach, bowels mouth & skin is the great medium thro' wh medicines act on the whole System - The Stomach possesses the greatest sympathy of any other part of the body. It may be compared to the regulator of a watch. —

3° There are medicines wh act on sensibility, as Camphor Mustard &c - Some wh act on irritability as Digitalis &c & some wh act on both as Opium & Bark. —

4° There are medicines wh enter the blood, & are deprived of their virtues in their first passage thro' it

5th There are some wh are deprived of their medicinal qualities by passing thro' the body

6th That the different parts of the system are capable of receiving more than one stimulus, & even such as are of opposite force at the same time

Those Sedatives wh act indirectly are such as open the bowels - these I will divide into 3 classes viz - 1st Lenient as Crystals of tartar, Nation, clysters, such as act by their quantity - Castor oil, Manna, vitriol with the different salts &c - 2d The Active as Rhubarb, Jalap, Calomel &c & 3d Drastic Purges as Gamboge Scammony aloes &c - To these diversions fasting may be added -

Cathartics are indicated

1st By a distention of the Bowels with Foces The first class th° be used here

2° By Complaints of the head - for this 1st class

3° In Congestion of any of the Viscera for this No 1

4° In all cases in which the bowels are unable to perform their functions - here No 3 or the

drastic are necessary

5' In all diseases of the Liver, Spleen &c for this No 1 or 2

6' In all diseases of the Skin, - for these No 1 or 2

7' In redness of the Skin from the excitement of the Capillary vessels - for this No 1 or 2 - In Q: Fever of - G3 they never failed to produce sweat

8" In Plethora - for this No 2 They may act by carrying off the redundant Chyle & preventing the formation of Blood

9' In all dropsical effusions attended with great Morb: action they are proper by lessening the excitement & producing absorption - for this No 2 or 3

10th In Obstructions of the Hemorrhoidal vessels for this No 1 -

11 - In obstinate obstructions of the bowels - for this No - 1, 2 or 3

Cathartics are also proper when the Stomach is irritated with bile -

In all febrile diseases when the pulse is above par they are useful - No 1 & 2 most proper here

In Dysentery & Diarrhoa in its recent state they act in 2 ways - 1st By evacuating the morbid contents of the bowels - 2d By creating a new action

Here it will be proper to remark that purgatives in a smaller quantity will not operate after a larger quantity has been used, & that a greater quantity shd be given to have the same effect if previously the system has been habituated to the same medicines. As an Alterative they shd be given in small doses so as to produce an Artificial Diarrhoa. When it is necessary to continue purges a great length of time they shd be varied. No solid food shd be taken during the operation of Purges, & they are not so certain in their operation if liquids be copiously given. The mild purgatives induce sweat more speedily than the drastic —

The Followg Rules shd be observed

1st The drastic purges act best by a combination with the Lenient - as Senna with Manna Jalap - Cream Tart —

2d after large doses wh have operated powerfully the intestines are so irritable that small doses will act.

Clysters act by their quantity & quality they are proper 1st In those cases where the stomach rejects purges 2d Stagnation of the fæces in the lower bowels as in pregnant women for the pressure of the Uterus on the Rectum They have been happily compared by Dr Rush to a short hand brush wh removes the soot for the lower part of the Chimney, while purges like a Chimney sweep scrape & sweep clean its whole extent. —

Purgatives are forbidden in the follow3 cases 1st In diseases of weak mort: excitem't 2d In the typhus state of fevers 3d In hemorrhages of the bowels 4th In the first stages of Colica Pictonum 5th In diseases of the lungs

Emetics are divided into 4 classes viz The Prompt, Mild, Powerful & Nauseating

1st Those wh act promptly as tickling the throat with a feather, putting the finger down the throat warm water, white vetriol &c ——

2. Those wh act feebly but certainly, as Ipecac: & Squills
3d Those wh act forcibly on the Stomach as Antim Tart. Turpeth Mineral &c —
4th Those wh act by nauseating the Stomach, as digitalis & tobacco, wh last may excite vomiting by being moistened with Brandy & applied externally. —

Emetics are indicated

1st In cases of swallowing large doses of Opium & Arsenic. In these cases the first Class shd be used. I have prevented death in 2 instances by these means.
2d In discharging bile, mucus or indigestible matters from the Stomach. Here the 2d Class shd be used
4th In a languid state of the Stomach. Here 2d Class
5th In Morbid diseases of the head from its sympathising with the Stomach. Here the 2 or 3 Class shd be used
6th In tumors in remote parts of the body as Buboes &c. Here the 2d or 3d Class are proper. They act here by exciting the absorbents —
7th In dropsical effusions. Here the 2 or 3d Class
8th In an oppression of the lungs as in Catarrh. Pulm: Consumpt. Cynanche Trachealis. here the

2d Class is proper – but when the lungs are affected with disease – they shd not be used

9th In dryness of the skin – here the 2d or 3 Class are proper, by promoting sweats

10th In the forming state of Malignt or contagious fevers – 2 & 3d Class proper here – they act in 2 ways – 1st By equalizing excitemt – & 2d by discharging the seeds of the disease

11th They are more powerful & effectual in the diseases of children than Adults. Children require more powerful Emetics than adults, as their Stomachs are lined with mucus. –

12th They are useful in Diarrhoa & some cases of Dysentery. –

In the Exhibition of Emetics you must observe 1st To give them in divided doses, that they may not operate too powerfully upon yr patients In the commencemt of inflammatory fevers in Plethoric habits always precede Emetics by V.S. 2d That as little water be given with them as possible when we want a prompt effect – No

drink whatever shd be given until Nausea comes on, & then never more than a pint or pint & 1/2. the less the quantity taken, the more certain & serviceable the Emetic — They shd be exhibited often, particularly in Malignt sore throat to be effectual — they sometimes act by inducing a new action. — 3d That they operate more certainly & forcibly in the morning, the system, at that time, being predisposed to sickness — 4th Never suffer them to operate while the Patient is recumbent, because by this means we prevent Spasm — 5th That their operation is checked by Laud. or a spoonful of salt in a pint of water. —

Emetics are forbidden

1st In violent inflammations & Congestions of the head & bowels — 2d In too feeble action of the system 3d In highly inflammatory fevers — 4th In advanced stages of pregnancy 5th In ruptures of all kinds 6th In low chronic fevers & general debility succeeding acute diseases. It is necessary to discriminate between the low & slow fevers

In the former wh is the true Typhus, emetics are very injurious. But in the slow, or Typhoid they are beneficial

Diaphoretics increase the discharge of the vitiated humours thro' the pores of the skin & act either directly on the Skin, or indirectly

1st Those wh act directly are Pediluvia, baths of warm water, vapour bath, clay of the heat of the body, & azote applied to the body by covering the head with a blanket. These may be called external sweats —

2d Those wh act indirectly & produce their effects by increasing the action of the heart & arteries, are exercise to promote sweat, cold water, this acts in a twofold way. 1st By reducing the immediate action of the Capillaries to the sweating point. 2d by the reaction of the skin when it is below this point. —

Diaphoretics act on the Capillary vessels indirectly thro' the medium of the Stomach.

1st By Nauseating as Antim: Tart: & 2d without nauseating as nitre, eupatorium, cold water &

when the capillary vessels are above the sweating point – these last act on the skin by means of continuous sympathy. Diaphoretics act 1st when the capillaries are above the sweating point, by diminishing the excitement directly – 2d When they are below it, by increasing it either directly or indirectly – 3° By their action being determined to the surface of the body, as dovers powder, vinegar, ardent Spts Eupatorium &c – 4th By the stimulus of distention produced by warm liquids of every kind – Each of these methods are necessary & are often indicated – 5th Purges frequently prove Diaphoretic by reducing the system to the sweat.g Point.

They are indicated 1st To discharge disease from the blood – the miasmata exciting fever often attempt to escape thro' the pores of the skin. I have heard of a young man in whom the Syphilis went off by the capillaries The poison of Animals also escapes sometimes from the blood thro' the skin by means of Diaphoretics —

2° They are indicated when the symptoms are so mild as not to require the Lancet. —

x Mosely has advised their use in the Dysentery of Jamaica

3d In Centrifugal diseases, as Gout Rheumatism &c when they affect the limbs — Diseases are called Centrifugal, when they affect the extremities, & centripetal when they affect the body as Colic Dysentery &c

4 In dropsical swellings when the symptoms are below the sweating point

5th In the forming state of some fevers — diluting drinks shd be given to assist their operation, & the patient during its continuance shd be permitted occassionally to eat to support his strength

6th In fevers in wh there is a disposition to sweat tho' excessive sweating is sometimes hurtful. —

The following Rules shd be observed —

1st Perspiration is most easily induced in bed — To excite it, flannel shd be worn next the skin — more perspiration will be induced in 9 hours in bed than in 15 out of bed.

2d Subdivided meals because the stomach being alternately full & empty is unfriendly to perspiration

3d Great attention is to be paid to the heat of the body because sweat cannot be induced with safety, when

the heat of the body is above 108 of Fahrenheit.

5. Diaphoretics are to be regulated by the stage of the disease.

6. They sh^d be suspended occasionally & used moderately least exhaustion sh^d take place

7th Care sh^d be taken to have the linnen & bed cloths of the patient often changed; because sweating is sometimes checked by a stiff shirt.

8th It is common to give diluting drinks in cases of redundant fluids from redundant secretions this practice is improper. But in cases of poison it ought to be done

9th Guard against cold & avoid purg^s & Blister^s when you prescribe diaphoretics, unless the urgency of the case require it.

Diaphoretics are forbidden 1st In highly inflammatory cases 2^d In cases of weak Mort: excitem^t. A gentle moisture on the skin in Typhus fever, or the Nador of the ancients is favourable but the Sudor is alarming. Sweats in the Hospital fever are generally fatal. 3^d When they weaken without relieving.

Diuretics are medⁿ wⁿ increase the urine & are 1st Cold air applied to the body when a little heated, going into a Cellar, climbing up stairs, hearing a stream of fluid running fm a Barrel, Cold water applied to the body, abstinence, fear, onions applied to the pubes & Exercise. These I shall call external diuretics - More successful among children because obstructions in them is never durable - Plunging a boys hand in cold water when asleep, will frequently make him wet his bed. During the Y. Fever, persons in its forming state were remarked to make an unusual quantity. Dr Rush supposes that Ascites & Diabetes arise generally fm affections of the Liver. Diabetes is nothing but Ascites thrown on the Liver

2d Deluting drinks, such as Melon seed tea white carrot seed tea, parsley tea. Dr Caldwell cured a patient of dropsy with the parsley tea after tapping had failed. This class I call Diluents

3d Those wⁿ act on the Kidneys by sympa-

1st In all cases where the system requires general depletion

They are forbidden in atonic Dropsy

Mercury acts in 2 ways. 1st As a revulsive and 2d as a depletion

they with the Stomach, as Salt of Tartar &c Neu: Salts Veg: Alkali &c

They are indicated where the Kidneys refuse to perform their office, & where they are suffocated with Morb: excitem^t - In Dropsical Swellings where the Morb: Action is not very violent, Digitalis & Iron are serviceable

They are forbidden in all cases where there is an inflammat^n of the Kidneys, & in every case in w^h you w^d not bleed. —

Sialagogues are Evacuants & Revulsives

Evacuants act 1st by discharging fluids from parts contiguous to the Salivary glands such as tobacco, Angelica &c

2^d By discharging fluids from the whole body in the form of Saliva - such as Mercury Arsenic, Sacch: Sat: &c - Mercury acts both as an evacuant & revulsive. Its one of the most powerful articles of the Mat: Med: yet its operation is disagreeable & loathsome - It has been said

Mercury acts in producing a salivation either by stimulating the system or by imparting its oxygen to the saliva for which it has a great affinity.

that merc: is not only a loathsome but also an unnatural remedy - But this is not the case, for merc: is the first remedy of Nature, if we admit that sore mouths & Aphthæ are the first diseases of Children - Hence when children sleep much, the gossips say they are sleeping for a sore mouth, & if examined at this time, they will be found to have a Fever. -

A determination to the mouth & throat is frequently the disease of Children, or rather the attempt of Nature to cure a disease, as Scarlatina Anginosa, Cynanche Trachealis &c

In Adults, spontaneous Salivation sometimes accompanies Fever, & the S. pox sometimes, & is generally a symptom of a favourable termination. Death frequently succeeds this useful & salutary remedy if it be suddenly suppressed. If a Cough & salivation attends patients with the Ty-Fever they generally recover. Sydenham mentions a Malignt fever in 1670-1671 being cured by a spontaneous salivation. A spontaneous sa-

livation has suddenly cured Dysentery & Gout. A spitting has occurred in Mania, & was called by the old writers Sputatoria. It marks the favourable termination of Autumnal fevers. It is therefore strange that it has not been used long ago in these cases, & that we do not always excite it when needful, that we so often excite it when not needful, & that we do not destroy life by it, as nature does in Apthæ Malignt sore throat &c.

The Auxillaries to excite salivation are 1st Rest this is of much importance. 2d Low diet. 3d Emetics. 4 Opium this assists by inducing costiveness. 5 Cold bath & ice applied to the head. Dr Armstrong of St Kitts used the cold bath to assist the operation of Mercury. I have used that as well as other cold applications. Dr Bloomfield used the cold shower bath, & the partial cold bath as Auxillaries to Merc. in producing salivation. Dr Chisholm tells us that Merc: acts soonest in moist weather 6th Merc: is greatly assisted in producing a salivation when

combined with Jalap - 7° with Antimonial powders. 8° With fictions of Merc: Ointment - 9° Nitrated or Muriated Merc: to be tried with friction, calomel, & corrosive sublim: When we wish to give Merc: secretly, we may put Calomel upon bread & butter, & let the patient eat it. It is not necessary in order to produce a revulsion that a profuse salivation be induced, or even a Ptyalism & in some cases not even a soreness of the Gums -

For restraining a Salivation - Of Opium, Purges, Blisters, Oils & Borax held in the mouth - washing the mouth with cold Water, & diuretics

In Philadelphia Merc: salivates 1 out of 4. In the W Indies 11 out of 12 in the Y. Fever. - This must be owing to less morb: action existing in the diseases of the W Indies than in Philadelphia.

A Salivation is indicated 1° In Malignant fevers, & such other fevers as are not remedied by other means - 2° In Morb: action of the head, lungs, liver, spleen, kidneys &c - 3° In diarrhoea & Dysentery - 4° In Syphilis - 5° In obstruc-

tions of the Viscera – here it is often proper not to give Calomel in such doses as to produce salivation directly – I have generally just made the mouth sore, thus making it act as an alterative 6th In old ulcers both external & internal wh have resisted the power of other remedies – 7th In convulsive diseases, as Tetanus &c

Salivation is forbidden 1st In highly excited states of fever – 2d In low exhausted states of fever – 3d In children under 6 yrs old 4th In persons above 60 – 5th In those having many decayed teeth – 6th In diseases tending rapidly to a crisis – Merc: will never produce gangrene when the system is sufficiently reduced, or after a salivation has taken place. It is to be regretted that Merc: is such a loathsome med: but man first sinned with his mouth, & to his mouth must med: be administered to remove the effects of that sin. –

Errhines. These act by depleting from the nose, & are of 2 kinds – 1st Those wh de-

+ They are indicated in Tooth ache earache &c &c
They ought not be used when there is a great determination of blood to the head, as their operation will increase it ——

Much has been said of Madder as a specific on the uterus but I do not believe any thing of it

plete from the nose & are of two kinds without producing sneezing - such as Sal: Ammoniac Turpith Mineral &c - 2d Those wh deplete from the Nose & produce sneezing as Tobacco &c ×

Expectorants are such Med: as increase the secretion from the Trachea - They are 1st Demulcents as flaxseed tea - Horse radish &c - 2 Emetics or Nauseating Medicines as Squills &c - Ipecac. 3d Volatile Alkali, Salt, smoke of Tar, beer wax, resin &c - Blisters act sometimes as expectorants from inverse sympathy

Expectorants are indicated in Pneumony, Catarh Asthma, Phthisis &c - here the 2d & 3d Class shd be used - Also in weak Morb: action of the Lungs here the 3d Class is required —

Emmenagogues in suppressed Menses shd be administered accord to the action of the system - There is no medicine wh has a specific action on the uterus - This class of Med: act by their stimulus imparted to the system by their long continuance - If great Morb ac-

Blisters act by discharging serum from the blood

tion exists Bof. sh^d be used but in weak mor: action Chalybeates & exercise sh^d be used. In this last case I have generally given Steel, w^h I believe fails only when given improperly. Aloes & Madder are scarcely worthy of notice as Emmenagogues.

Blisters

These act 1st Slowly as Cantharides & the bark of certain trees - 2^d Suddenly as Boiling water + & 3^d Epispastics made of equal parts of Mustard & Canthar: - These in many cases are better than flies alone - as they will rise in 3 or 4 hours instead of 10 or 12 w^h flies require. Boiling water to produce the effect sh^d be applied for 5 to 10 minutes. They are indicated - 1st in General diseases of weak mor: excitem^t here the 1st Class sh^d be used - 2^d In local congestions of the head bowels &c - here the 1st Class - 3^d In sudden congestions here the 2 Class - In diseases of the head, breast & joints - In diseases of the liver - In Malignant fevers when we are fearful of Gangrene, Bles=

× in general diseases, but in Local diseases they may be applied at any state of the Pulse —

It is preferable to apply them rather near than on the affected part as its extreme sensibility may perhaps elevate it above the blistering point
In chronic diseases we may apply half a dozen at the same time and thereby bring the whole system into action

ters shd be applied to the thighs shoulders, head & neck, & not on the extremities. The Typhoid pulse is that wh demands the use of blisters — When they are applied with a pulse above Typhoid, & Pus is discharged instead of Serum. If below, no discharge at all, or Gangrene. —

The follow^g rules shd be observed —

1st They shd remain on until they produce a serous discharge — 2d When applied to the head they shd remain 24 hours 3d As all blisters never discharge much after the 2d dressing, new ones shd be applied if necessary. They deplete by sympathy. —

Blisters are forbidden 1st In General diseases of great morb: excitem^t — 2d In very weak morb: ex: 3d In habits highly irritable & in persons liable to suffer from strangury. 4 In Pregnancy

Issues are medicines to lessen the quantity of fluids gradually as Setons, Caustics, perpetual blisters &c — Issues are indicated 1st when the gradual abstraction of morb: excitem^t is required

2d In local congestions where danger arises from fulness or Pressure on parts essential to life — 3d In cutaneous eruptions of the face or parts necessary to motion — Gout & Pul: Consumptn have been suspended by a slight eruption on the Skin. —
Issues act directly, or indirectly by equalizing excitement, & when the system has been habituated to their use they shd be relinquished with caution
In suffocated excitement medicines shd be applied gradually — blood extracted, in but small quantity at a time — Cold water applied externally is always improper in the absence of heat — & in suffocated excitement there is very little. —
I have thus mentioned the remedies for disease in an open & sensible form —

We come next to the Second Class — viz Stimulants

+ Additional Stimulants 1st Soporifics or those medicines which produce profound sleep – they should be used in low fevers. 2d Medicines calculated to prevent sleep and increase wakefulness – they are used in high arterial action and likewise in the decline of fevers. Remedies. 1st Keeping the patient in an erect posture. Conversation strong tea and coffee. small and frequent doses of Laudanum. –
3d Medicines intended to check vomiting 1st Lying in bed in a dark room. Carbonic acid gas in celser waters. lime water – acids of all kinds. Blisters.

Stimulants - These I shall divide into 1st Stimulants properly so called, or those wh, remove morb: action by exciting a stronger & less diseased action in the affected part, or in some other part of the body; or wh remove morb: action in one part of the body by exciting in another part less essential to life + IId Tonics or other medicines wh prevent the recurrence of disease, by removing predisposing debility. Both of these act by converting excitability into excitemt when they cure without abstracting any of the fluids of the body

Wine & Opium are diffusible stimuli; but all stimuli are more or less difficult in their action on the whole system. Here I exclude those sedatives wh destroy irritability or morbid action by force such as Cerusa acetata Digitalis & Miasma, wh resemble more the breaking down a door to get into a house than simply turning the key. But depletion ought be used in most cases in preference to such remedies altho depletion is certainly useful in Hemorrhages, yet sugar of lead often does good after it fails. In this case

the lead acts by lessening excitability - Consumption when cured by Opium & Digitalis often returns

Stimuli to reduce great morb: action, act as exercise & labour by reducing excitability, but in general they do great violence to the system & are much inferior to depleting remedies - They act more safely in Muscular than in Arterial diseases - Some diseases are however beyond the reach of depleting remedies as Tetanus, & the morbid grades of Bilious fever - Here the Opium & bark cure by prostrating the system below morbid action, & thereby wasting excitability. A Question now arises, when are Stimulants to be used? This must be regulated by the stage of the disease, the state of the system, & more particularly the Pulse. When they occasion heat, a frequent & slow pulse they are improper - If they produce none of the above symptoms, but impart a fulness & slowness, they may be used with advantage, & the saying that there is a time for all things is in nothing so striking as in Medicine - The Manner of giving Stimuli is in Rotation &

I once cured a case of Tetanus by giving 1st Wine 2d Bark 3d Opium, 4th Brandy & water & then the Wine again — but more of this hereafter

Of those Med: wt remove morb: action by exciting a stronger & less diseased action in the affected part or some other part of the body. Stimulants are of this class & shd be preceded by 1st reducing the system below their force by means of depletion — This may hold good as a general rule, yet there are exceptions to it 1st When it is necessary to destroy irritability in hemorrhages by Sacch: Sat: & in other cases by Digitalis 2d When we dissipate excitability, as in Tetanus. — II When excitability is accumulated begin with small doses of stimulating medicines & observe at the same time to defend the system fr other stimuli, as light, conversation exercise &c For these by hurrying on the system will defeat the intention of the medicine. In Pleurisy after V.S. once or twice endeavour to suspend the Cough by opium; but IIId When there is no accumulation of excitability

+ VI In chronic diseases stimuli sh^d be intermitted frequently ——————

as in Typhus fever, begin with large doses of stimulating medicines for while large doses of stimuli convert the excitability into excitement & health small doses will dissipate the remaining excitability without being of any service —

IV Do not combine too many stimulating medicines; for they generally act best in a simple form, but to this there are some exceptions

V Use them in rotation, & after you have given all, revert back again — for the system will often become insensible to one stimulus; which another of weak action will affect it — Liquid Laud: may be successful when Opium fails & vice versa. Dr Dewitt tells us that a pill of Opium made 6 Mos before, will sometimes do good, when a recent one does harm — It is probable that no two Med: even of the same class exert precisely the same effects The Stomach will sometimes bear Quassia & not Columbo & vice versa. Chronic diseases as Intermittents & require Stimulants. —

VII Frequently change the place to wh stimuli

are to be applied. When the Stomach has been inured to Stimuli apply them to the Skin, wh stills retains its sensibility as Blisters to the Abdomen &c. In chewing Tobacco only on one side of the mouth, that side is with much more difficulty affected by the Tobacco than the other side wh is unaccustomed to it. Even when snuff is taken into one Nostril only at a time, it becomes at length more insensible to its effects than the other. — Opium when ineffectual in large doses in the Stomach, is frequently active when thrown into the intestines — Bark after becoming inert in the Stomach is often active when injected into the Bowels, or applied to the Skin in the form of a quilted jacket. Electricity when applied to the breast of a Cock is said to revive, & cure the effects produced by it on the Head. Opium obviates the effects of Opium, when applied in a different manner for the first — Merc^y obviates the effects of Merc: tho' the practice be not safe. Having admitted that there were Specific Stimuli we are obliged to admit an indefinite number of

them; but those that are feeble from the various changes of the irritability of the system. An Emetic when the stomach has lost its sensibility is inert, because its muscular fibres do not vibrate in unison with the medicine

VIII Sometimes the system is very sensible to weak stimuli when it is not at all affected by strong — strong purges destroy the contractile powers of the stomach, when weak ones act by assisting in the recovery of that power. This is explained by considering that there are different grades of excitability & stimuli must be accommodated to the grade — that is, the stimulus must vibrate as it were with the excitability of the system. I once knew a lady who could not hear the noise made by the firing of cannon, but could distinctly hear the noise made by firing a musquet. I also knew a Gent: with Hemiplegia, who was not the least affected by sticking pins in the affected part, but by lightly touching it with a feather he be immediately convulsed.

×accumulated

10 exhaustibility unequally diffused in disease. This has extensive application thus a circle healed by shocks of electricity applied to the hence will be seized by the same shocks applied to another part of the body -

Q. In all chronic cases Stimuli shd be given in the morning, the excitability, at this time, being increased. Baron Homberg says there is a certain relationship kept up between the different stimuli according as they are given in succession. Alkali for instance, will restore the excitability of the stomach when dissipated by acids - but acids will not restore it when dissipated by alkalies - Do the alkalies act by exciting the dormant faculty of the stomach?

<u>Of Medicines</u> wh remove Morb: action in a part by exciting it in another part less essential to life - or equally essential but not worn down, see the laws of Sensation - Many Physicians do this without knowing it - A head ache is cured by a Diarrhoa - Natural hemorrhages by V.S. Morbid action in the viscera, by Blisters - Dropsy, by diuretics acting on the kidneys - Morb: action of the Lungs, by emetics acting on the stomach. Apoplexy by a throbbing on the back, the morbid action being thus transferred - Hartley tells us that he gave a dog nux vomica, & then severely

chipped him. & the nux vomica had no effect, owing to the impression on the skin predominating in force over that of the Stomach — Observe now that there is but one impression felt among those of unequal force, & that is the strongest. — Remember

1st You must reduce the morb: action below the stimulating point by Vs that the med: may at once predominate over the remaining morb: action. I observe again that there are exciting, depleting, blistering, & sweating points, wh it is as necessary for the Physician to know, as that a mariner shd know the signs wh discover a port. —

2d Take care that the part in wh you excite morbid action be less essential to life, than the part fr wh you intend to remove it. To this there are some exceptions — 1st In Convulsive Epilepsy delirium has been induced by opium with advantage — In Consumptn it is sometimes proper to create morb: action in the brain by means of Opium or Spirits — Here it is better to bring on derangement in the brain wh is more essential to life than the lungs than to let disease be sta

tionary in the lungs, doing more irreparable mischief. Intoxication sometimes entirely removes consumption &c. 2° Tetanus is often cured by drunkenness. 3° In Pleurisy it is most effectual to put a blister on the affected part. & in fevers it is sometimes necessary to bring on hunger to such a degree as to endanger life, in order to accumulate excitability in the stomach

3° To prevent unsuccessful practice enquire into the peculiarities of the patient, his habitual diseases &c but in dangerous diseases little attention is requisite to the effects of habitual Medicines

4° When the second mord: action wt is excited becomes languid, a third must be excited, because pain fm habit becomes pleasurable. —

5° Attend to association in diseases. when Gout is flying about the body it is proper to stimulate the great toe wt has already been attacked by it in preference to the other. when we wish to induce regular Gout by soliciting it to the extremities. Dr Darwin mentions the case of a man who was always recruited when he felt fatigued, by

thinking of a person whom he hated. — In the translation of disease, the Skin & bowels sh^d be preferred to any other part — but we sh^d make this our rule, to seek out the weakest part, & if no part is more debilitated than another, create a weak part by friction

One disease may be cured by generating another thus Pregnancy sometimes cures Hysteria by the translation of excitement to the Bloodvessels — Climbing a flight of stairs has cured drunkenness by the muscles of the lower limbs being preternaturally debilitated, & the translation of excitement from the brain to them. — Might not excessive exercise be useful in the treatment of Mania?

In Stimulants I include the passions, such as Anger & Terror, but the agreeable passions most often cure diseases by preponderating over painful impressions. I knew a man who could relieve himself at pleasure from the pains of Rheumatism by shaving. — Pronouncing popular names, words & events sometimes relieve pain — Hope & Faith have sometimes wonderful effects in curing diseases. —

× Debility is constantly attended with considerable relaxation of the bloodvessels ——

Of Medicines wh prevent the recurrence of diseases by removing predisposing & succeeding debility — These I shall call Tonics — & the rules to be observed in their exhibition are the follow.g

1st Begin with small doses & gradually increase a much less quantity is necessary to remove debility than is necessary to cure disease

II.d In your choice of Tonics always prefer such as are durable in their operation as Aliment — in the use of wh observe 1st Always prefer that wh is agreeable to the taste & stomach — & tho there sh.d be no appetite, still continue to give the Aliment, for who.d wait for an appetite to give medicine —

2.d Recommend to debilitated persons to eat 5 or 6 times a day & once or twice at night, if sleepless — for the stomach of a debilitated person is like a school boy, who if he be not busy is apt to be doing harm. A full meal however like poison sh.d be avoided —

3.d Accommodate the diet to the excitability of of the system — 4 Solid food sh.d be preferred, as it makes the most flesh, while liquid food makes the

most fat — 5th the less nourishing is preferable — On this acct salt meat is preferable to fresh — 6th there are cases in wh only one kind of food is required. A Gent: in this City affected with violent Stomach complaints, was perfectly cured by boiled turnips alone. Boiled carrots are said to cure the Asthma, Bread & milk the Gout — A diet solely of fish has cured certain inflammatory diseases — The Stomach prefers a homogenious food — Beef & Mutton have cured Dyspepsia, & Oysters visceral obstructions & dropsy When it is necessary to confine a patient to a particular Article of diet, we must not give it up too soon because it disagrees a little with the Stomach at first, after a while, it & the Stomach will become naturalized to each other. — 7th A diet by weight & measure of the same aliment cures diseases. — Dr Taylor was cured of Epilepsy by the milk of a cow fed in the summer on grass & in the winter on hay but was disordered as soon as he ate of the milk taken from a cow wh was fed on grain. — 8th Uniform hours in eating are strictly necessary

the sooner after leaving bed in the Morn^g the better.

Drinks. Tonics comprehend 3 kinds of Drinks. These are 1st Malt liquors — 2^d Different wines as Madeira sherry & 3^d Low wines as Malaga, Port, Champaigne & Cider. You see I do not include Ard^t Spt^s in this class for a man had better die than use this detestable Brunonian remedy. In Chronic cases they are always injurious, as their use will finally create a love for them, wt when confirmed by habit, nothing can eradicate. —

IV Cold & Warm Baths remove debility & diseases of weak morbid action. The warm bath shd be used between 12 & 1 o'clock only —

From 110 to 100° of Fahrenheit constitutes the hot bath
100 to 96 the warm
96 to 85 the Tepid
85 — 65 Temperate
65 — 32 Cold The Hot bath is peculiarly adapted to the stricture state of the system useful in the cure of Manalgia, & diseases of weak morb: action. The warm bath is very

much used in Italy - when it is used the patient may continue in fr 10 minutes to 2 hours & half. The warm bath may be made more stimulating by the addition of common salt, & heat may be applied to the body thro' the medium of hot salt

The Cold bath shd never be used when the body is debilitated or covered with sweat - It shd not be continued too long, or it debilitates. In great torpor of the system as in Manalgia, ice applied to the head & hot water to the feet has equalized the excitement of the system. — The Cold bath acts indirectly as a Tonic abstracting heat & accumulating excitability; & dressing after the use of the cold bath converts the excitability into excitement — To be more effectual it shd be preceded by the warm

2° It shd be temperate - when the water is cold it shd be warmed & vice versa

3° It shd be used 2, 3, or 4 times a day

4 In a warm room during the winter

5 Exercise & friction shd succeed it

V

V Exercise holds a great rank in the class of Tonics as obviating simple debility, & may be divided into 1st Passive 2d Active

1st Passive includes, Fraction, rocking in a cradle, chamber horse, swinging, sailing &c

2d Active walking, labour swinging sailing &c Riding on horseback is partly active, & partly passive. Exercise increases the action of the Lymphatics & muscular strength. — The following rules are to be observed in the use of exercise

1st In great debility begin first with the passive, as friction the effects of it in overcoming debility are wonderful the flesh brush, here made use of may occasionally be impregnated with Crème or Ardt Spts It increases the action of the Bloodvessels & muscles, promotes secretion & sensation. The Chinese are remarkably fond of this remedy, & carry it so far as to have professed Fractors as we have Barbers they frequently hold their brushes over vapours of Nitrik previous to their application. It is remarkable that a curried cow will give more milk than

Dr Rush emphatically terms exercise the Morality of the Mat: Med.

one that has not been subject to the curry comb.—
The exercise of the hands as in Shuttle cock— the good effects of this we see daily in Tailors Shoemakers ladies &c.— Swinging & Sailing & riding in a Carriage, are the next stage of exercise, as they take place in the open air. Swinging is useful when the patient is not able to take other exercise— It was recommended by Dr Hogarth & J. Smith in Consumptn— I cured one case of this disease completely by it.— Sailing creates a disease in the Stomach, & thereby carries off the seeds & effects of the primary disease— it also keeps up a perpetual conflict between the passions of Hope & fear— Sailors are generally healthy when the vessel is kept clean.—
The Balloon only used formerly in time of war, may yet come to be used in cases of debility.—
Partial exercise as before observed removes debility. A person held one hand in water at 62 & by exercising the other it rose to 68 after it had risen only to 64 by the warmth of the room. Riding on horseback is highly recommended in Consumptn—

It expends less excitability than walking, it may be used in cases where it is necessary to expend much excitability — 2d Avoid all fatigue 3d Accommodate it to the state of debility — 4 The same rule may be observed in the use of exercise as in eating — never take so much, at a meal, as to render you unable to take more immediately afterwards without injury — Patients are often in this respect ungovernable 5 Exercise should never be used before breakfast, or immediately after a meal — Different kinds of exercise suit different diseases — as exercising the muscles of the back in Nephritis — Labour of the arms best in Pulm: Consumptn

VI Habitual debility is to be removed by a change of occupation

VII Travelling is an agreeable & useful Stimulus for the exercise it attends it, the change of air and succession of new objects It removes from the inquiries of friends after the health of the sick, which inquiries often do harm. I have known a return of an Intermittent induced, by a friend asking the pati-

ent 7 hours after the usual return of the fever, whether he had escaped it

VIII Change of Climate & of former associations are useful in nervous diseases as Hypochondriasis Hysteria &c Epilepsy, Stone, & even convulsions are cured by it. Sheep are benefitted by a change of climate, & men prolong their life by the change, especially old people when it is fm a colder to a warmer one

IX An uniform climate for invalids tho different fm that they have been accustomed to, is of considerable service to them. In certain cases of debility, a warm room fm 70 to 79 day & night. shd be used, & in order to keep the room fm being too warm, a vessel of water shd be placed upon the stove wh will evaporate at a certain degree of heat & thereby cool the air of the room by its vapour

X Change of diet drs & Mansion is frequently of great service

XI Cheerful company & agreeable reading obviate debility

XII Advise Convalescents to go to bed early at a fixed

hour, & to ride at the same hour every morning. Sleep protracted to 12 hours has given the system time to recruit itself; & patients have recovered after their lives have been despaired of. —

XIII Strictly forbid their going into the night air, or moist weather, or gratifying the venereal appetite

XIV. Accommodate their dress to the weather. Their dress had better be 3 degrees too hot than too cold. It ought be loose, there ought be no ligatures, flannel ought be worn next the skin & they ought sleep between blankets — They ought sleep upon a mattrass — as a soft bed induces indirect debility — & alternately on the sides, but never on the back in debility, because the nightmare frequently attacks in that posture. —

Medicines wch remove debility

Bark & Steel are the best in direct debility. Strong drinks sometimes cures diseases by ~~by~~ knocking out excitability, rousing dormant excitement, & afterwards locking it up in the muscles — The Indians when fatigued will rest themselves by carry

ing a large log sometimes a mile or two & then laying it aside —

Mineral Waters do great harm in diseases of increased arterial action, but in nervous bowel complaints &c they are extremely useful. They act as Tonics by the ingredients they contain, by the degree of temperature, & by the quantity taken in at a time — Purging Min: waters are not Tonics, consequently I am not speaking of them here. Mineral waters cannot well be imitated by art — They often do harm at first, but after a while much good. —

Sea air is also a Stimulant & may be prescribed with the same precaution as the Min: waters

Matrimony is also a powerful Stimulant. —

Music has been esteemed a Tonic — Milton & Boerhaave duly appreciated it as such. —

Mercury may sometimes act as a universal Stimulant — it will be most useful in all cases of debility where obstructions are present — It is here one of our best remedies — even when the more agreeable fail. — Accidents wh have produced terror have

have removed debility —

In the use of Tonics, always attend to the state of the System, for debility is the next door neighbour or threshold of disease, & sometimes even worse than disease — There is a debility below a certain point where the patient is unable to walk, as in Syncope, Palsy, Apoplexy, in wh excitability is highly accumulated here gentle & weak stimuli are proper. A few drops of Cold water, friction, smell of burnt feathers &c will often do more service than the most violent medicines — Friction is generally better in Palsy than the more powerful Stimuli

When excitability & excitement are prostrated or nearly exhausted, as occurs in the first stage of Malignant fever, & the last in the Chronic diseases, the most powerful Stimuli are necessary, as Caustic, red hot iron, boiling water, fire coal &c — But when a total destruction of a part takes place, wh in Animal matter is called gangrene, the Stimuli shd be applied around the part, as turpentine, hot poultices, Blisters &c with the internal use of Bark Wine & Opium.

Large doses of Narcotic medicines have overcome debility it has refused to yeild to all the tonic remedies in small doses

Tonics are exhibited 1st By the mouth 2° By injection 3° By the nose 4° By the Lungs 5. Externally. The mouth is the best channel for medicine from the sensibility of the mouth fauces & Stomach & their sympathy with the whole System Opium may be given by way of Glyster, in this way it is generally necessary to administer 3 times the quantity of that taken into the Stomach to be as effectual - Spirits, Camphor, Vol: Salts &c may be applied to the nose. Dr Chisholm of Montpelier with Camphire & Opium applied externally cures obstructed menses, with Digitalis dropsy; & with bark & Spts all kinds of fevers - In this case I think the friction of the hand the principal means of cure. I have known Camphor & Opium dissolved in sweet oil to act like a charm in pains of the Knees when applied externally to the part. — Shoemakers wax & burgundy pitch applied to the soles of the feet relieve headache. Spirits to the

abdomen relieve colic - Sweet oil has cured Ascites & when rubbed over the whole body has been said to cure Malignt fever - The manner in wh they act is 1st by friction - 2d By exciting a determination of the fluids to the part - 3d By sympathy sometimes they all three combine - The parts to wh these medn may be applied, are the Stomach, belly, inside of the thighs, near the perineum soles of the feet, arm pits, back bone & anus. -

There are some who have a Susceptibility to one class of medicines, or a particular med. in a class fm Idiosyncrasys - we thd try to find out this. -

<u>Of Medicines</u> wh remove diseases by abstracting redundant & foreign matters fm the body, & wh offend by their quantity or quality. These matters are mucus worms, bile, fus Calcareous matter &c & the medicines Vomits, Purges Diuretics, Anthelmintics - Deobstruents, Sialagogues &c of wh we have spoken before. -

Of Medicines wh remove diseases by mixing with & thus destroying matters wh offend by their quality - 1st Magnesia destroys acids in the Stomach by uniting with & neutralizing them 2d Bilious & Renal Calculi, by lime water, vegetable alkali vitriolic acid &c 3d The Itch is cured by Sulph: & Merc: - the venereal disease by Mercury. Demulcents are used to allay cough Catarrh &c - they are Flaxseed tea, decoction of bran mallows, sulphur Mercury &c

Of Medicines wh cure diseases by removing obstructions. - These as I said before, are not the cause but the effects of disease. They produce disease by reacting, & occur most frequently in the Visceral & Lymphatic glands - Thus we see morbid debility, disease & obstructions at the same time. - These medicines are certain Tonics called Deobstruents, as Bark, Steel, Mercury, Arsenic, Cold bath, external applications, local bleeding, fear acts powerfully, & I think it is in this way the Royal touch acts. I will conclude this subject

with observing that obstructions are the effects of acute or chronic inflammat^n & where Nes has been used in time they rarely occur. —

Of Medicines w^h are supposed to

cure diseases by changing the quality of the fluids or the texture of the solids. The only two remedies worthy of Consideration under this head are Oxygen gas & Carbonic acid gas, taken into the Stomach they exert a manifest action on the Kidnies. —

Of Medicines for relieving pain.

Pain may be defined to be a tendency to a solution of Continuity in a part — As pain is the effect of disease, the remedies, sh^d be proportioned & accommodated to the State of the System. Pain is sometimes a remedy, & in this case it sh^d not be relieved, unless so violent as to endanger life

1st Of relieving pain as in Pleurisy, headache, Gout, Rheumatism, Colic &c & where the Arterial excitement is general. —

2d Opium in large doses relieves pain, when morbid excitement is moderate, by inducing indirect debility, & thus reducing the system to the sleep point. In giving large doses care shd be taken that the seat of the disease or pain, be not in a part where effusions are dangerous, as in the Brain &c. It shd be cautiously used - it appears to be better adapted to the relief of pain in cases of moderate action of the Bloodvessels. When offensive to the stomach it may be given by Glyster - When Opium fails, henbane, hops & hemlock shd be tried. -

3d Fasting relieves pain. Dr Priestly informed me that a criminal who was put upon the torturing machine bore the pain with fortitude by fasting 2 or 3 days before. Those who die of famine never feel pain after the first 4 or 5 days owing to loosing their sensibility at this time - The system is here reduced to the stricture state

4 Cold water eases pain, when there is great morb: action. This was often experienced in Yellow Fever of 1793 When given by way of injection, it acts

acts like a charm in hemorrhoids ×

5 Cold air is useful in great Morb: ex: This relief is frequently found in thrusting a painful limb out of bed.

× 6th Ice is beneficial added to the water, it sh^d be continued a long time. Gentle effusion of water gives great ease in Gout. But dashing it on the limb increases the pain. This verifies the act of the rich man in the Gospel who intreated a drop of water to quench his thirst. —

7th Warm water acts as an Anodyne in cases of great morb: action. given as a Clyster in Colic. It is a great stimulant to the muscular fibre. It will excite the action of the heart out of the body when irritating it with a needle will not. It lessens pain when applied externally. Pediluvium often relieves a light headache. —

8 Demulcents & oil relieve pain, as poultices — Sweet oil

9 Fractions of the hand Lord Nelson in his last moments frequently called out "rub, rub."

10 Rubifacients relieves pain in extreme parts

A Sheepskin or the maw of a Cow on the Stomach frequently cures colic in children

11 Cheerful company

12 Hallowing gnashing the teeth & crying all mitigate pain - Women bear childbirth much better by crying - It is evidently injurious to smother our groans, however unmanly it may appear to give vent to them. A French Marquis once died by thus suppressing his feelings during a painful operation - Homer describes the dying Soldiers as biting the ground to ease the pain of their wounds

13 Fear chases away pain when accompanied with great morb: action

14 Whipping relieves pain - for instance, for instance the dog that was whipped after taking a large dose of Nux vomica, by Dr Hartley - He also gave Arsenic to another, wh was also whipt & discovered no symptoms of pain from the Arsenic

15th Pressure on the abdomen relieves the tortures of the Colic - The Indians cure the Colic by standing on the belly of the Sufferer for 10 or 15 Minutes

A Gent in this City removed the pain of the Rheumatism by applying a hot iron near the affected part

16 Sounds relieve pain. I once heard of a man who was relieved of the pain of the Gout by making his servants sing very loud. It is owing to this that we seldom see many children cry at the same time. The child that cries the loudest generally silences the rest. Their pain being in a measure relieved

17 Employment both of body & mind Gen: Koscusko relieved himself of pain in Petersburg by turning himself around

18th By Cupping

19 Small draughts of water when there is great thirst Dr Fothergill obtained ease in inflammation of the bladder in this way. "Water water" was almost the last cry of the expiring Lord Nelson. —

20th Cutting the nerves leading to the affected part frequently relieves the Toothache

21 Sulphur when presses between the fingers cures muscular Spasm Mechanically.

Mustard gives more relief applied near, than

immediately on the affected part. this is explained by the affected part being percupied by Morb: excitent.

22 Metalic or other sharp pointed instruments

23 Animal electricity & Magnetism. this acts by concentrating the mind to one object & by the principal of faith. —

24 Counting a hundred backwards

25 Fainting relieves pain by a revulsive action — Horses frequently bite their ribs to relieve the pain of the Colic — Pains in the stomach & bowels are most effectually relieved by Sypapisms of mustard to the feet — Periodical pains are best cured by the Bark, or Asafotida according as they affect the arterial or nervous system. —

The sight of a long absent friend has roused expiring nature & performed cures after medicine has lost its effect. The Indians bear torture heroically from resentment at the insults of their enemies

Might not surgical operations be rendered less painful by being performed gradually? The Surgeon might abstract the knife for a few moments & then proceed — Nature shews us the necessity of

intermissions in pain; were this not the case, what woman could support the pains of parturition. —

What w^d be the effect prior to an Operation, of rendering the system insensible by a large dose of Opium? Drunkenness has rendered a woman insensible to the pains of Parturition. —

The next & last article in our Therapeutics is the <u>Means of Obtaining Longevity</u>. This is not foreign to our subject. In life there is a constant tendency to death & Longevity is only obtained by accommodating excitement to excitability, or the Stimuli wt support life to the excitability. The same rules wt preserve life, do not answer in all cases; but we are to be regulated by the different states of the System. Let clothing, diet, drinks amusements exercise &c be accommodated to the different habits & states of the system as varied by age &c

I cannot dismiss this subject without expressing my regret that there are so few books wt are not written empirically; few are written to accommodate remedies to the different states of the system, hence the many contradictions in them. Few

medicines act alike in the same disease at different times — thus we see that Opium at one time relieves & at another increases it — it is thus with all medicines. In short medicines are only relatively good, that is, they only do good when suited to the different states of the system — When I hear that V.S. is prescribed in fever or in Cynanche Trachealis without attention to the state of the System, I feel as if I was listening to regular bred quackery. Such Physicians remind me of the Bermudean Sailor who on his passage to the West Indies threw shingles into the sea, in order to find his way more easily back. As well might we expect that the Alphabet when jumbled in a box wd fall out in the form of an Epic Poem, as that medicines wd cure diseases, when thrown into the system without any regard to the symptoms & stages of the disease, or in short to the state of the system —

Here Gent: we take our leave of Therapeutics, & come next in order to the fourth & last subject — The Practice of Medicine.

1 Necessity of presence
2 Difference
3 The kinds & degrees of attention required by exhibition of medicines
4 Permanent & partial effect here in hyp
and chronic fevers where low diet has been practised for some time
Lastly may may persons birthrate & ever
peculiarly applicable in chronic fevers